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Practical Rules

FOR THE

RESTORATION AND PRESERVATION

OF

HEALTH,

AND THE

BEST MEANS FOR INVIGORATING AND PROLONGING
LIFE.

BY THE LATE CELEBRATED

GEORGE CHEYNE, M.D.. F.R.S.

TO WHICH IS ADDED,

THE SYMPTOMS AND BEST MODE OF TREATING SOME
OF THE MOST PREVALENT DISORDERS.

Ἀσκήσεις Ὑγιείνης, ἀφορμή Τερεφῆς, ἀσκήσις Πόνων.—HIPPOC.

At imbecillis (quo in numero magna pars urbanorum, omnesque penè cupidi literarum sunt) observatio major necessaria est; ut quod vel corpori, vel loci, vel studii ratio detrahit, cura restituat.—CELSUS.

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1834.

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TO THE

RIGHT HONOURABLE

SIR JOSEPH JEKYLL,

MASTER OF THE ROLLS,

This Treatise

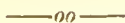
IS INSCRIBED AS A TESTIMONY OF RESPECT
AND GRATITUDE,

BY HIS MOST OBLIGED,

FAITHFUL, HUMBLE SERVANT,

GEORGE CHEYNE.

P R E F A C E.



THIS being probably the last time I may trespass on the public, I look upon myself, in some measure, obliged to settle my accounts with the world as an Author, before I make my exit, by endeavouring to shew I have not always offended out of presumption, vanity, or wantonness.

The first time I adventured in print, was on the account of my great master and generous friend, Dr. Pitcairn. He thought himself ill-used by some of his brethren of the profession, who then were at intestine war on the subject of fevers; and fancied the handsomest way to bring them down, was to exhibit a more specious account of this disease than any of them had shewn. His business then in the

practice of physic was so great as not to allow him sufficient time for such a work ; two others, therefore, with myself, were joined to manage the affair : in which he was to cut and carve, and to add the practical part. My province was the theory : I was then very young in the profession, and living in the country ; but in a few days I brought in my part finished, as it now appears, under the title of "The New Theory of Fevers." The others either suppressed or forgot theirs ; and mine, without the least alteration, but in a few words, was ordered for the press. I could not resist the commands of my friend ; but would not suffer my name to be put to it, being conscious it was a raw and unexperienced performance. There are, though, some things in it which may be of use to beginners, both as to the method of philosophizing on the animal economy, and in the account of the manner of the operation of the greater medicines. The foundations also, and the causes assigned for acute and slow fevers, I still think solid and just, and more particular

and limited than those of any other theory yet published ; but it wants so much filing and finishing, so many alterations and additions, as would cost me more labour and pains than the writing a new treatise on the same subject ; so that out of mere laziness and inappetency, I have thrown it by as unripe fruit, and suffered it to be, as if it never had been.

My next sally was in a book of abstracted geometry and algebra, entitled, “*Methodus Flexionum Inversa*,” brought forth in ambition and bred up in vanity. There are some things in it tolerable for the time, when the methods of Quadratures, the mensuration of Ratios, and transformation of Curves, into those of other kinds, were not advanced to such heights as they now are ; but it is a long time since I was forced to forego these barren and airy studies for more substantial and commodious speculations ; indulging and rioting in these so exquisitely bewitching contemplations, being only proper for public professors, and those born to estates, and who are under no outward neces-

sities; besides, to own a great but grievous truth, though they may quicken and sharpen the invention, strengthen and extend the imagination, improve and refine the reasoning faculty, and are of use both in the necessary and the luxurious refinement of mechanical arts; yet, having no tendency to rectify the will, sweeten the temper, or mend the heart, they often leave a stiffness, positiveness, and sufficiency on weak minds, much more pernicious to society, and the interests of the great end of our being, than all the advantages they bring them can recompence. They are indeed edge-tools, not to be trusted in the hands of any, but those who have already acquired an humble heart, a lowly spirit, and a sober and teachable temper. For, in others, they are very apt to beget a secret and refined pride, an over-weening and over-bearing vanity (the most opposite temper to the true-gospel spirit, which, without offence, I may suppose to be the best disposition of mind), that tempts them to presume on a kind of omniscience, in respect of their fel-

low-creatures, that have not risen to their elevation ; and to set up for an infallibility, or at least a decisive judgment, even in matters which do not admit of a more or less (their proper object), of which kind whatever relates to the infinite Author of our being most certainly is. Upon all which accounts, conscious of my own weakness, I have long since bid them an adieu, farther than as they serve to amuse, or are useful in the absolute necessities of life.

The defence of that book against the learned and acute Mr. Abr. de Moivre, being written in a spirit of levity and resentment, I most sincerely retract, and wish undone, so far as it is personal or peevish, and ask him and the world pardon for it: as I do for the defence of Dr. Pitcairn's Dissertations, and the New Theory of Fevers, against the late learned and ingenious Dr. Oliphant. I heartily condemn and detest all personal reflections, all malicious and unmannerly turns, and all false and unjust representations, as unbecoming gentlemen, scholars, and christians ; and disprove and undo both

performances, as far as in me lies, in every thing that does not strictly and barely relate to the argument.

The first part of the Philosophical Principles, that of Natural Religion, consists merely of discourses and lectures of Natural Philosophy, and of its consequences on religion, occasionally read or discoursed to that most noble and great person, the Duke of Roxburgh, who is now so great an ornament to his country, and his high employments, to whom they were inscribed. I thought they might be of use to other young gentlemen, who, while they were learning the elements of natural philosophy, might have thereby the principles of natural religion insensibly instilled into them. And, accordingly, it has been and is still used for that purpose at both Universities. Upon which account, upon proper occasions, I will not fail to improve it in all the new discoveries in experimental philosophy, or in the final and natural causes of things as happen to be made, so as to leave it as little imperfect in its kind as I possibly can.

The second part of the Philosophical Principles, to wit, that of revealed religion, was added afterward, to shew, that all our knowledge of nature was by analogy, or the relations of things only, and not their real nature, substance, or internal principles: that, from this method of analogy (the only medium of human knowledge) we should be necessarily led to conclude the attributes or qualities of the supreme and absolute infinite were indeed analogous to the properties or qualities of finite beings, but only in such a manner as the difference between infinite and finite requires; and that, therefore, not being able to know precisely these differences, we ought implicitly to believe, without reasoning, what is revealed to us concerning the nature of the infinite Being; or bring our reason to submit to the mysteries of faith. How I have succeeded is not for me to determine. As the end was honest, I am sure the great principles and the fundamental propositions are true and just. They may want a little farther clearing up and explication: but as yet I have

met with no reason to retract any thing material, else I should most certainly do it.

The Essay on the Gout and Bath waters was brought forth by mere accident. The first draught being, as I there mentioned, only a paper of directions for a gentleman, my friend and patient, troubled with the gout. It was enlarged upon different occasions, and published to prevent its being pirated; several copies having been given out to others in the same circumstances. I have the satisfaction to know, from many different hands, that it has benefited great numbers of infirm and afflicted persons; and shall therefore go on to cultivate it as far as my poor abilities will permit.

I am now come to this my last production, whose origin was as casual as that of my former. My good and worthy friend, the présent Master of the Rolls, having been last autumn at Bath, for a confirmation of his health, at his departure desired of me to draw up some instructions in writing, to direct him in the conduct of his health for the future, and in the manner of sup-

porting his spirits free and full, under the great business he is engaged in. I was then in the hurry of our season, and could not so soon answer his expectation as his real worth and my sincere esteem required. I thought myself, therefore, the more obliged, as soon as I had leisure, to exert myself to the utmost in obedience to his commands. At first I drew up most of these rules at the end of the several chapters; but, upon reflection, thought it not respect enough to his good taste and capacity to judge of the reasons of things, to prescribe him bare and dry directions in matters of so great moment. I added, therefore, the philosophical account and reasons of these rules, which make up the bulk of the chapters themselves. He, out of his love to his fellow-citizens (which is one shining part of his character, and which I ought to suppose has in this instance only imposed on his better judgment), desired they might be made public. Upon which account several things have been since added, to make the whole of more general use. If, therefore,

any thing in this Treatise be tolerable, or if any person receive benefit by it, they owe it entirely to that excellent person, upon whose account solely it was undertaken, and at whose request it is published.

I have indeed long and often observed, with great pity and regret, many very learned, ingenious, and even religious persons, who being weak and tender (as such generally are) have suffered to the last extremity for want of a due regimen of diet, and other general directions of health, who had good sense enough to understand the force and necessity of such rules, valued health sufficiently, and despised sensual gratifications for the pleasures of the mind so far, as to be able and willing to abstain from every thing hurtful, deny themselves any thing their appetites craved, and to conform to any rules for a tolerable degree of health, ease, and freedom of spirits; and yet being ignorant how to conduct themselves, from what to abstain and what to use, they have suffered even to mortal agonies; who, had they been better

directed and instructed, had passed their lives in tolerable ease and quiet. It is for these, and these only, the following Treatise is designed. The robust, the luxurious, the pot-companions, the loose, and the abandoned, have here no business; their time is not yet come. But the sickly and the aged, the studious and the sedentary, persons of weak nerves, and the gentlemen of the learned professions, I hope, by the divine blessing on the following Treatise, may be enabled to follow their studies and professions with greater security and application, and yet preserve their health and freedom of spirits more entire, and to a longer date. I am morally certain, had I known and been as well satisfied of the necessity of the rules here laid down, thirty years ago, as I am now, I had suffered less, and had had a greater freedom of spirits than I have enjoyed. But every thing is best as it has been, except the errors and failings of our free wills.

I know no useful means of health and long life I have omitted, nor any pernicious custom

I have not noted; and have given the plainest and most familiar reasons I could urge for the rules I have here laid down. Most of my arguments (as they needs must) have risen out of the animal functions and economy; and I have used as little subtilty and refinement in my explications of these, as the present state of natural philosophy could admit. I have been often contented with plain and obvious facts to account for appearances, and the cautions then deduced; when, according to the humour of the present age, I might have run into refined speculations of metaphysics, or mathematics; being contented with the *crasso modo philosophari*; because we shall never be able to search out the works of the Almighty to perfection, so as to penetrate the internal nature of things.

I have consulted nothing but my own experience and observation on my own crazy carcase, and the infirmities of others I have treated, in the following rules, their reasons and philosophy, (so that if any thing is borrowed, it has

occurred to me as my own) but in so far as authorities go to shorten philosophical accounts. Not but that all systematic writers in physic, and many particular authors, have treated the same subject: but their rules, besides that they are often inconsistent with reason, or contrary to experience, are so general, and expressed in so unlimited and undefined terms, as leave little or no certainty in them; when applied to particular cases, they want the necessary precision and exactness, and so became useless or perplexing: and lastly, when they come (which is rarely to be found among them) to give the reasons and philosophy of their directions, they have not the perspicuity and natural way of convincing the ingenious, sickly, and tender sufferers, so necessary to make them cheerfully and readily undergo such severe restraints; which I take to be by far the most difficult part of such a work, and which I have laboured with my utmost power to supply.

I know not what may be the fate and success of this performance; nor am I solicitous about

it, being eonseious the design was honest, the subject weighty, and the execution the best my time, my abilities, and my health would permit, which eannot bear the labour of much filing and finishing. Being careful not to eneroach on the province of the physieian, I have concealed nothing my knowledge could suggest to direct the sufferer, in the best manner I could, to preserve his health and lengthen out his life ; and I have held out no false or delusory lights to lead him astray, or torment him unnecessarily.

If it were possible any set of men could be offended at my performanee, it might be my brethren of the profession, for endeavouring to lessen the *materia morbigica*. But as this would be the most malicious, unjust, and unworthy reflection which could be thrown on scholars and gentlemen of a liberal education ; so I never entertain the most remote vanity to think any endeavour of mine would make so considerable a change in the nation ; especially when the devil, the world, and the flesh were on the other side of the question, which have

stood their ground even against the rules of life and immortality brought to light by the gospel.

I cannot conclude this tedious Preface without begging pardon of the reader for troubling him with my private matters. All I can say as an apology is, that of whatsoever indifference my concerns as an Author may be to him, yet they were not so to me; this being the only place and time I may have to adjust them in, and it being the height of my ambition.

Nil conscire mihi, nullâ pallescere culpâ.

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RULES

FOR THE

PRESERVATION OF HEALTH.

IT is a common saying, that every man past forty is either a fool or a physician : it might have been as justly added, that he was a divine too : for, as the world goes at present, there is not any thing that the generality of the better sort of mankind so lavishly and so unconcernedly throw away as health, except eternal felicity. Most men know when they are ill, but very few when they are well. And yet it is most certain, that it is easier to preserve health than to recover it, and to prevent diseases than to cure them. Towards the first, the means are mostly in our own power : little else is required than to bear and forbear. But towards the latter, the means are perplexed and uncertain ; and for the knowledge of them, the far greater part of mankind must apply to others, of whose

skill and honesty they are in a great measure ignorant, and the benefit of whose art they can but conditionally and precariously obtain. A crazy constitution, original weak nerves, dear-bought experience in things helpful and hurtful, and long observation on the complaints of others, have at last (in some measure) taught me some of the most effectual means of preserving health and prolonging life in those who are tender and sickly, and labour under chronical distempers. And I thought I could not spend my leisure hours better than by putting together the most general rules for that purpose, and setting them in the clearest and strongest light I could, for the benefit of those who may want them, and yet have not had such favourable opportunities to learn them.

And that I might write with some order and connexion, I have chosen to make some observations and reflections on the non-naturals (as they are called, possibly because that in their preternatural state they are eminently injurious to human constitutions ; or more probably, because though they be necessary to the subsistence of man, yet in respect of him, they may be considered as external, or different from the internal causes that produce diseases) to wit—the air we breathe in—our meat and drink—our sleep and watching—our exercise and rest—our evacuations and their obstructions—the passions of our minds : and, lastly,

to add some observations that come not so naturally under any of these heads. I shall not consider here how philosophically these distinctions are made ; they seem to me the best general heads for bringing in those observations and reflections I am to make in the following pages.

The reflection is not more common than just, that he who lives physically must live miserably. The truth is, too great nicety and exactness about every minute circumstance that may impair our health, is such a yoke and slavery, as no man of a generous free spirit would submit to: 'Tis, as a poet expresses it, "to die for fear of dying." And to forbear or give over a just, charitable, or even generous office of life, from a too scrupulous regard to health, is unworthy of a man, much more of a christian. But then, on the other hand, to cut off our days by intemperance, indiscretion, and guilty passions, to live miserably for the sake of gratifying a sweet tooth, or a brutal itch ; to die martyrs to our luxury and wantonness, is equally beneath the dignity of human nature, and contrary to the homage we owe to the Author of our Being. Without some degree of health, we can neither be agreeable to ourselves, nor useful to our friends ; we can neither relish the blessings of divine providence to us in life, nor acquit ourselves of our duties to our maker, or our neighbour. He that wantonly transgresseth the self-evident rules of health,

is guilty of a degree of self-murder; and an habitual perseverance therein is direct suicide, and consequently, the greatest crime he can commit against the Author of his Being; as it is slighting and despising the noblest gift he could bestow upon him, viz. the means of making himself infinitely happy; and also as it is a treacherous forsaking the post wherein his wisdom has placed him, and thereby rendering himself incapable of answering the designs of his Providence over him. The infinitely wise Author of Nature has so contrived things, that the most remarkable rules of preserving life and health are moral duties commanded us, so true it is, that godliness has the promises of this life, as well as that to come.

To avoid all useless refinement, I will lay down only a few plain easily observed rules, which a man may readily follow, without any trouble or constraint.

CHAPTER I.

OF AIR.

AIR being one of the most necessary things towards the subsistence and health of all animals, it is a wonder to me, that here in England, where luxury and all the arts of living well are cultivated even to a vice, the choice of air should be so little considered.

From observations on bleeding in rheumatisms, and after catching cold, it is evident that the air, with its different qualities, can alter and quite vitiate the whole texture of the blood and animal juices : from the palsies, vertigoes, vapours, and other nervous affections, caused by damps, mines, and working on some minerals, (particularly mercury and antimony) it is plain air so and so qualified, can relax and obstruct the whole nervous system. From the cholics, fluxes, coughs, and consumptions, produced by damp, moist, and nitrous air, it is manifest that it can obstruct and spoil the noble organs. The air is attracted and received into our habit, and mixed with our fluids every instant of our lives ; so that any ill quality in the air so continually introduced, must in time produce fatal effects on the animal economy : and therefore it will be of the utmost consequence to

every one, to take care what kind of air it is they sleep and watch, breathe and live in, and are perpetually receiving into the most intimate union with the principles of life. I shall only take notice of three conditions of air.

The first is, that when gentlemen build seats, they ought never to place them upon any high hill, very near any great confluence of water, in the neighbourhood of any great mines, or beds of minerals, nor on any swamp, marshy, or mossy foundation; but either in a champaign country, or on the side of a small eminence, sheltered from the north and east wind, or upon a light gravelly soil. The nature of the soil will be well known from the plants and herbs that grow on it, or rather more securely from the nature of the waters that spring out of it, which ought always to be sweet, clear, light, soft, and tasteless: All high mountains are damp, as Dr. Halley observed at St. Helena, a mountainous place, where damps fell so perpetually in the night-time, that he was obliged to be every moment wiping his glasses in making his astronomical observations. And where the mountains are high, the inhabitants of them are forced to send their furniture in winter to the valley, lest it should rot. And it is common to have it rain or snow on mountains, when the valleys below are clear, serene, and dry. All great hills are nests of minerals, and covers (made of the

prominent earth) for reservoirs of rain-water. The clouds are but great fleeces of rarified water sailing in the air, sometimes not many yards above the champaign country; and these high hills intercepting them, they are compressed into dew and rain, and are perpetually drilling down the crannies of the mountains into these basins. Hence the origin of rivers, and fresh water springs. Besides that, these mountainous places are always exposed to high, and almost perpetual winds. Where any great concourse of water is, the air must needs be perpetually damp, because the sun is perpetually straining from these waters moist dews and vapours through it. All great nests of minerals, or large mines, must necessarily impregnate the air with their respective qualities; and mossy blackness is some degree of putrefaction, as Sir Isaac Newton observes, in his treatise on light and colours.

Secondly, the winds that are most frequent and most pernicious in England are the easterly, especially the north-east winds, which in the winter are the most piercing cold, in summer the most parching hot. In winter, they bring along with them all the nitre of the northern and Seythian snows, mountains of ice, and frozen seas through which they come; and in summer, blow with all the fiery particles of the perpetual day they pass through. From the end of January till towards

the end of May, the wind blows almost perpetually from the eastern and northern points, if the spring is dry ; and from the southern and western points if the spring is wet, (and generally from the settling-in of the winds, on a new moon, you may predict the weather of the spring) and our bodies most certainly attracting the circumambient air, and the fumes of those bodies that are next to us, it will be very convenient for valetudinary, studious, and contemplative persons, in a dry spring, or in easterly winds, to change their bed-chambers into rooms that have western or southern lights, or to shut close up the eastern and northern lights, or to have them but seldom opened ; and in wet seasons, to take the contrary course. And if any such person has been much exposed, or long abroad in a northerly or bleakish easterly wind, it will be very proper for him to drink down, going to bed, a large draught of warm water gruel, or of warm small mountain wine whey, as an antidote against the nitrous effluvia sucked into the body, and to open the obstructions of the perspiration made thereby.

Thirdly, from the beginning of November till towards the beginning of February, London is covered over with one universal nitrous and sulphurous smoke, from the multitude of coal fires, the absencce of that material divinity the sun, and the consequence thereof, the falling of the dews

and vapours of the night. In such a season, weak and tender people, and those that are subject to nervous or pulmonie distempers, ought either to go into the eountry, or to be at home soon after sun-set, and to dispel the damps with clear warm fires and cheerful conversation, go early to bed, and rise proportionally sooner in the morning; for, as the sun's removal suffers the vapours to fall and condense in the evening, so his approach dispels and raises them in the morning. I need not add, that it will be very fit for those that are valetudinary to have their servants, children, bed-fellows, and all those that approach them, with whom they live constantly, and mix atmospheres, to be as healthy, sound, and sweet as possibly they can; and, for their own sakes, to have them removed till they are made so, if they are otherwise. Nor shall I add any pressing instances, to avoid wet rooms, damp beds, and foul linen, or to remove ordure and nuisances; the luxury of England having run all these rather into a vice.

The air is a fluid, wherein parts of all kinds of bodies swim as in water. But air differs from water in this, that the first is compressible into a lesser compass, and smaller volume, like a flecce of wool, either by its own weight, or any other force, which weight or force being removed, the air immediately recovers its former bulk and dimensions again, whereas no force whatever can

bring water into narrower bounds ; that is, air is extremely elastic and springy, but water is not at all so. Yet the parts of air would seem to be grosser than the parts of water : for water will get through a bladder, and may be forced through the pores of gold ; but air will pass through neither. By this its elastic force, the air insinuates itself into the patent cavities of all animal bodies ; and the infant which never breathed before, as soon as it is exposed to this element, has the little bladders, whereof the lungs consist, blown up into a perpendicular erection on the branches of the windpipe ; whereby the obstruction, from the pressure of these vesicles (arising from their being compressed together, and lying upon one another) being in some measure taken off, the muscular action of the right ventricle of the heart is able to force the blood through the lungs into the left ventricle. But these little bladders, being thus inflated by an elastic fluid, still press so far upon, and grind the grosser particles of the blood into more sizeable ones, that they may become small enough to circulate through the other capillary vessels of the body. This elastic air, pressing equally every way round, by its weight and spring, shuts close the scales of the scarf-skin of healthy and strong persons ; so that it denies all entrance to the nitrous and watery mixture contained in it, and thus becomes a kind of cold bath to them, and

defends them from catching cold : but in sickly, studious, and sedentary people, and those of weak nerves, where the spring of the eoverlets and scales that defend the mouths of the perspiratory duets is weak, the perspiration little, or next to none at all, and the blood poor and sizy ; the nitrous and watery partieles of the air get a ready and free entrance, by these ducts, into the blood, and by breaking the globules thereof, coagulating, and fixing its fluidity, quite stop the perspiration, and obstruct all the capillary vessels, the cutaneous glands, and those of the lungs and alimentary passages, when such bodies are long exposed to such an air ; and thus begets all these disorders in the body that air, thus and thus poisoned, was shewn eapable to produce. So long as the perspiration is strong, brisk, and full, it is impossible any of these disorders should happen ; because the force of the perspiratory steams outward is greater than the force whereby these noxious mixtures enter ; unless the body be indisercetly too long exposed, or the action of the nitrous and watery mixtures be extremely violent. Hence it comes to pass, that those who are very strong and healthy, and those who have drank strong liquors so plentifully, as to have thereby a brisk eirculation and full perspiration, seldom or never eatch cold. And this is the reason why rich foods and generous wines, moderately used, become so excellent an

antidote in infectious and epidemic distempers ; not only as they banish fear and terror, but as they make so full and free a stream of perspiration, and maintain so active and brisk an atmosphere, as suffers no noxious steams or mixtures in the air to come within it ; but drives and beats off the enemy to a distance. But persons of viscous, heavy fluids, of poor and sizzly juices, of little or no perspiration, such as generally all studious, sedentary, and sickly persons are, but especially those that are subject to nervous disorders, must necessarily suffer under these poisonous mixtures in the air, if they do not cautiously and carefully fence against them, or take not a present remedy and antidote, when tainted. For besides the air that gets through the perspiratory duets into the blood, whenever we eat, drink, or breathe, we are taking into our bodies such air as is about us. And when the concoctive powers are weak, as in such persons, and the quantity of the food is too great, or its quality too strong for them, the chyle is too gross, and the perspiratory matter is stopped, because too large for these small duets ; and this whole mass, which in common health is more than double of the gross evacuations, recoils in upon the bowels, and becomes, as it were, spears and darts, and armour to the air received from without ; which being thus sharpened with the salts of the unconnected food, together with its own elastic

force, pierces the sides of the vessels, and gets into all the cavities of the body, and between the muscles and their membranes, and there, in time, brings forth hypochondriac, hysteric, nervous, and vapourish disorders, and all that black train of evils which such constitutions suffer under.

I shall now draw out the cautions here inculcated into a few general rules.

GENERAL RULES RESPECTING AIR.

The healthiest situation for a seat is in a campaign country, or on the side of a small eminence, on a gravelly soil, with a southern or western exposition, sheltered from the north and east winds, distant from any great concourse of waters, or any great mines, or beds of minerals, where the water is sweet, clear, light, soft, and tasteless.

Tender people, on the setting in of easterly and northerly winds, ought to change their bed-rooms for others of westerly and southerly lights, and the contrary in wet seasons.

Those who have been much exposed to, or long abroad in, easterly or northerly winds, should drink some thin and warm liquor going to bed.

When the dark, dull, foggy weather lasts at London in winter, tender people, and those of weak nerves and lungs, ought either to go into the country or keep much at home in warm rooms, go early to bed, and rise betimes.

Valetudinary people ought to have their servants, children, and bed-fellows, or those they continually approach and converse with, sound, sweet, and healthy, or ought to remove them until they are so, if they are otherwise.

Every one, in order to preserve their health, ought to observe all the cleanness and sweetness in their houses, clothes, and furniture, suitable to their condition.

CHAPTER II.

OF MEAT AND DRINK.

To have our food, that is, our meat and drink, as to quantity and quality, duly regulated, and precisely adjusted to our concoctive powers, would be of the utmost consequence to Health and Long Life. Our bodies require only a determinate quantity thereof, to supply the expences of living ; and a just proportion of that to these would very probably preserve us from acute, most certainly from chronical distempers, and enable us to live without much sickness and pain, so long as our constitutions were originally made to last. The sources of chronical distempers are, first, viscidities in the juices, or the over largeness of their constituent particles, which not being sufficiently broken by

the concoctive powers, stop or retard the circulation ; or, secondly, too great abundance of sharp and acrimonious salts, whereby the juices themselves are rendered so corrosive, as to burst or wear out the solids ; or, thirdly, a relaxation, or want of a due force and springiness in the solids themselves. An excess in quantity begets the first, the ill-condition of our meat and drink the second, and both together, with want of due labour, the third.

The meat of England is generally animal substance. The animals themselves, from epidemic causes, bad food, age, or other infirmities, have their diseases as well as human creatures ; and these diseased animals can never be proper or sound food for men. Adult animals abound more in urinous salts than young ones : their parts are more closely compacted, because more forcibly united : and so harder of digestion. 'Tis true, the great distinction of the fitness or unfitness of the several sorts of animals and vegetables for human food depends upon their original make, frame and nature (and that can be found out only by experience), as also upon the special taste, complexion, temperament, and habits of the person that feeds on them. But by the help of these three principles viz., first, that the strength or weakness of cohesion of the particles of fluid bodies, depends upon their largeness or smallness : that is, the largest

partieles cohere more firmly than the smaller, because more parts come into contact in large bodies than small, and so their union is greater. Secondly, that the greater the force (*momentum*) is, with which two bodies meet, the stronger is their cohesion, and the more difficult their separation. Thirdly, that salts, being comprehended by plain surfaces, being hard, and in all changes recovering their figure, unite the most firmly of any bodies whatsoever : their plain surfaces bring many points into contact and union, their hardness and constant figure make them durable and unalterable ; and thereby the active principle, and the origin of the qualities of bodies ; and when they approach within the sphere of one another's activity, they firmly unite in clusters ; all which make the separation of their original partieles the more difficult. I say, from these principles, we may in general compare the easiness or difficulty of digesting (that is, breaking into small parts) the several sorts of vegetables and animals, one with another ; and so discover their fitness or unfitness for becoming food for tender and valetudinary persons.

All other things being supposed equal, those vegetables and animals that come to maturity the soonest are lightest of digestion. Thus the Spring vegetables, as asparagus, strawberries, and some sorts of sallading, are more easily digested than

pears, apples, peaches, and nectarines ; because they have less of the solar fire in them ; their parts are united by a weaker heat, that is, with less velocity, and abound less in, nay scarce have any, strong and fixed salts. Among the animals, the common poultry, hares, sheep, kids, rabbits, &c. who, in the same, or a few years, come to their maturity, (that is, to propagate their species) are much more tender and readily digested than cows, horses, or asses, (were these last in use for food, as they have been in famine, &c.) for the reason already given, because their parts cohere less firmly. And it is observable, of the vegetables which are longest in ripening, that is, whose juices have most of the solar rays in them, that their fermented juices yield the strongest vinous spirits ; as grapes, elder-berries, and the like : and of the animals that are longest in coming to maturity, that their juices yield the most rank and most foetid urinous salts.

Other things supposed equal, the larger and bigger the vegetable or animal is, in its kind, the stronger and the harder to digest is the food made thereof. Thus a large onion, apple, or pear, and large beef and mutton, are harder to digest than the lesser ones of the same kind ; not only, as their vessels being stronger and more elastic, their parts are brought together with a greater force ; but also, because the qualities are proportionably more in-

tense in great bodies of the same kind : thus, other things being equal, a greater fire is proportionably more intensely hot than a lesser one ; and the wine contained in a larger vessel becomes stronger than that contained in a lesser ; and, consequently, the juices of larger animals and vegetables are more rank than the juices of smaller ones of the same kind.

Other things being equal, the proper food appointed for animals by nature is easier digested than the animals themselves ; those animals that live on vegetables, than those that live on animals ; those that live on vegetables or animals, that soonest come to maturity, than those that live on such as are longer in ripening. Thus milk and eggs are lighter of digestion than the flesh of beasts or birds ; pullets and turkies than ducks and geese ; and partridge and pheasant are lighter than woodcock or snipe ; because these last being long-billed, suck only animal juices ; and for the reasons already given, grass-beef and mutton are lighter than stall-fed oxen and sheep.

All things else being alike, fish and sea animals are harder to digest than land animals ; because universally their food is other animals, and the salt element, in which they live, compacts their parts more firmly, salts having a stronger power of cohesion than other bodies. And for the same reason, salt-water fish is harder to digest than fresh-water :

Thus the sea tortoise is harder to digest than the land tortoise; and sturgeon and turbot than trout or perch.

Other things being equal, vegetables and animals that abound in an oily, fat, and glutinous substance, are harder to digest than those of a dry, fleshy, fibrous substance, because oily and fat substances elude the force and action of the concoctive powers, and their parts attract one another, and unite more strongly than other substances do (except salts), as Sir Isaac Newton observes in his first English edition of light and colours. Their softness and humidity relaxes and weakens the force of the stomach, and the fat and oil itself is shut up in little bladders, that are with difficulty broken. Thus nuts of all kinds pass through the guts almost untouched; olives are harder to digest than peas; fat flesh meat than the lean of the same. Carp, tench, salmon, eel, and turbot, are much harder to digest than whiting, perch, trout, or haddock.

Vegetables and animals—all things else being alike, whose substance is white, or inclining to the lighter colours, are easier to digest than those whose substance is redder, browner, or inclining towards the more flaming colours; not only because the parts that reflect white, and the lighter colours, are less in bulk than those that reflect the more flaming colours; but also because those of the more flaming colours abound more with urinous salts.

Thus turnips, parsnips, and potatoes, are lighter than carrots, skirrets, and beet-raves. Pullet, turkey, pheasant, and rabbit, are lighter than duck, geese, woodcock, and snipe; whiting, flounder, perch, and soal, are lighter than salmon, sturgeon, herring, and mackerel; veal and lamb is lighter than red or fallow deer.

Lastly—all other things being equal, vegetables and animals of a strong, poignant, aromatic, and hot taste, are harder to digest than those of a milder, softer, and more insipid taste. High relish comes from abundance of salts; abundance of salts supposes adult animals, and such as are long coming to maturity; and where salts abound, the parts are more difficult to separate, and harder to be digested. Strong and aromatic plants imbibe and retain most of the solar rays, and become solid spirits, or fixed flames; and they that deal much in them swallow so much live coals, which will at last inflame the fluids and burn up the solids.

There is nothing more certain, than that the greater superiority the concoctive powers have over the food, or the stronger the concoctive powers are in regard of the things to be concocted, the finer the chyle will be, the circulation the more free, and the spirits more lightsome; that is, the better will the health be. Now from these general propositions taking in their own particular complexion and habits, valetudinary, studious, or contemplative

persons may easily fix upon these particular vegetable or animal foods that are fittest for them. And if any error should be committed, it is best to err on the safest side, and rather choose those things that are under our concoctive powers, than those that are above them. And, in the choice of animals for our food, we must not pass over the manner of fattening and fitting them up for the table. About London we can scarce have any but crammed poultry, or stall-fed butchery-meat. It were sufficient to disgust the stoutest stomach, to see the foul, gross, and nasty manner in which, the fœtid putrid, and unwholesome materials, with which they are fed. Perpetual foulness and cramming, gross food and nastiness, we know, will putrify the juices and mortify the muscular substance of human creatures ; and sure they can do no less in brute animals, and thus make even our food poison. The same may be said of hot-beds, and forcing plants and vegetables. The only way of having sound and healthful animal food, is to leave them to their own natural liberty, in the free air, and their own proper element, with plenty of food, and due cleanness, and a shelter from the injuries of the weather, when they have a mind to retire to it. I add nothing about cookery ; plain roasting and boiling is as high as valetudinary, tender, studious, and contemplative persons, or those who would preserve their health, and lengthen

out their days, ought to presume on. Made dishes, rich soups, high sauces, baking, smoking, salting and pickling, are the inventions of luxury, to force an unnatural appetite and increase the load which nature, without incentives from ill habits, and a vicious palate, will of itself make more than sufficient for health and long life. Abstinence and proper evacuations, due labour and exercise, will always recover a decayed appetite, so long as there is any strength and fund in nature to go upon. And it is scarce allowable to provoke an appetite with medicinal helps, but where the digestive faculties have been spoiled and ruined by acute or tedious chronical distempers; and as soon as it is recovered to any tolerable degree, nature is to be left to its own work, without any spurs from cookery or physie.

The next consideration is the quantity of food that is necessary to support nature, without overloading it, in a due plight: that is indeed various, according to the age, sex, nature, strength, and country the party is of, and the exercise he uses. In these northern countries, the coldness of the air, the strength and large stature of the people, demand larger supplies than in the eastern and warmer countries. Young growing persons, and those of great strength and large stature, require more than the aged, weak, and slender. But persons of all sorts will live more healthy and longer by universal

temperance than otherwise. And some general observations on the quantity persons of different nations and conditions have lived on, healthy and to a great age, may give some assistance to valetudinary and tender persons, to adjust the due quantity necessary for them.

It is surprising to what a great age the eastern christians, who retired from the persecutions into the desarts of Egypt and Arabia, lived healthful on a very little food. We are informed by Cassian, that the common measure in twenty-four hours was about twelve ounces or a pound, (for the eastern pound was but twelve ounces) with mere element for drink. St. Anthony lived to 105 years, on mere bread and water, adding only a few herbs at last.—James, the hermit, to 104—Arsenius, the tutor of the emperor Areadius, to 120; 65 in the world, and 55 in the desert—St. Epiphanius, to 115—St. Jerome, to about 100—Simeon Stylites, to 109—and Romualdus, to 120—And Lewis Cornaro, a Venetian nobleman, after he had used all other remedies in vain, so that his life was despaired of at forty, yet recovered and lived, by the mere force of his temperance, near to 100 years.

Our northern climate, as I said, from the purity and coldness of the air, which bracing the fibres, makes the appetite keener, and the action of digestion stronger; and from the labour and strength

of the people, which makes the expence of living more, will necessarily require a greater quantity of food ; yet, it is wonderful, in what sprightliness, strength, activity, and freedom of spirits, a low diet, even here, will preserve those that have habituated themselves to it. Buchanan informs us of one Laurence who preserved himself to 140, by the mere force of temperance and labour. Spottiswood mentions one Kentigern (afterwards called St. Mongah, or Mungo, from whom the famous well in Wales is named,) who lived to 185 years, though, after he came to the years of understanding, never tasted wine nor strong drink, and slept on the cold ground. My worthy friend, Mr. Webb, is still alive ; he, by the quickness of the faculties of the mind, and the activity of the organs of his body, shews the great benefit of a low diet, living altogether on vegetable food and pure element. The history of the milk doctor of Croydon, who, by living on milk only, cured himself of an otherwise incurable distemper, viz., the Epilepsy, and lived in perfect health for sixteen years after, till an accident cut him off, I have already narrated in my treatise of the gout. Henry Jenkins, a fisherman, lived 169 years : his diet was coarse and sour, as his historian informs us, that is, plain and cooling, and the air where he lived sharp and clear, viz., Allerton upon Swale, in Yorkshire. Parr died sixteen years younger, viz., at the age of 152 years,

nine months ; his diet was old cheese, milk, coarse bread, small beer, and whey : and his historian tells us, he might have lived a good while longer, if he had not changed his diet and air, coming out of a clear, thin, free air, into the thick air of London ; and after a constant, plain, and homely diet, being taken into a splendid family, where he fed high, and drank plentifully of the best wines, whereby the natural functions of the parts were overcharged, and the habit of the whole body quite disordered, upon which there could not but soon ensue a dissolution. Dr. Lister mentions eight persons, in the north of England, the youngest of whom was above 100 years, and the eldest 140. He says, it is to be observed, that the food of all this mountainous country is exceedingly coarse. And certainly there is no place in the world more likely to lengthen out life than England, especially those parts of it that have a free open air, and a gravelly and chalky soil, if, to due exercise and abstemiousness a plain simple diet were added.

I have elsewhere offered to determine the quantity of food sufficient to keep a man of an ordinary stature, following no laborious employment, in due plight, health, and vigour ; viz. eight ounces of meat, twelve of bread, or vegetable food, and about a pint of wine, or other generous liquor in twenty-four hours. But the valetudinary, and those employed in sedentary professions, or intel-

lectual studies, must lessen this quantity if they would preserve their health, and the freedom of their spirits long. Studious and sedentary men must of necessity eat and drink a great deal less than those very same men might do, were they engaged in active life. For as they want that exercise that is necessary towards concoction and perspiration, and that the nerves are more worn out by intellectual studies, than even bodily labour would waste them : if, in any wise, they indulge freedom of living, their juices must necessarily become viscid, and their stomachs relaxed. He that would have a clear head must have a clean stomach. The neglect of which is the cause why we see so many hypochondriacal, melancholy, and vapourish gentlemen among those of the long robe ; the only remedy for which is labour and abstinence.

Most of all the chronical diseases, the infirmities of old age, and the short periods of the lives of Englishmen, are owing to repletion ; this is evident from hence, because evacuation of one kind or another is nine parts of ten in their remedy : for not only cupping, blistering, issues, purging, vomiting, and sweating, are manifest evacuations, or drains, to draw out what has been superfluously taken down ; but even abstinence, exercise, alteratives, cordials, bitters, and alexipharmics, are but several means to dispose the gross humours, to be more readily evacuated by insensible perspi-

ration ; that new and well concocted chyle, and sweet comminuted juices, may take their place to restore the habit ; and, therefore, it were much more easy, as well as more safe and effectual, to prevent than incur the necessity of such evacuations. And any one may lose a pound of blood, take a purge or a sweat ; by dropping the great meal, or abstaining from animal food and strong liquors, for four or five days (in chronic cases) as effectually as by opening a vein, swallowing a dose of pills, or taking a sudorific bolus.

I advise, therefore, all gentlemen of a sedentary life, and of learned professions, to use as much abstinence as they possibly can, consistent with the preservation of their strength and freedom of spirits, which ought to be done as soon as they find any heaviness, inquietude, restless nights, or aversion to application ; either by lessening one half of their usual quantity of animal food and strong liquors, until such time as they regain their wonted freedom and indolence ; or by living a due time wholly upon vegetable diet, such as rice, sago, pudding, and the like, and drinking only a little wine and water. And if they would preserve their health and constitution, and lengthen out their days, they must either inviolably live low, (or *maigre*, as the French call it) a day or two in the week, or once a week, fortnight, or month at farthest, take some domestic purge, which shall re-

quire neither diet, nor keeping at home ; but may at once strengthen the bowels, and discharge superfluous humours : of this kind are a dose (six or seven) of the Scotch pills ; half a drachm of the *pilulæ stomachicæ cum gummi*, with three or four grains of diagryd, mixed ; half a drachm of the *pilulæ ruffi* ; two ounces of *hiera picra*, with one drachm of the syrup of buckthorn ; two or three ounces of elixir salutis ; or (what I prefer before all these) this preparation of rhubarb :—

Take the best rhubarb in powder, two ounces and a half ; salt of wormwood, a drachm ; orange-peel, half an ounce ; grated nutmeg, two scuples ; cochineal, half a drachm. Infuse forty-eight hours by a warm fire-side, in a quart of true arrack. Strain it off, and put it in a well corked bottle for use.

Of this two or three spoonfuls may be taken, two or three times a week, or at pleasure, with great safety and benefit, without interruption of business or studies, and continued even to mature old age, if found necessary ; so true is old Verulam's aphorism, viz. " nothing contributes more to health and long life than frequent family purges ;" and the gentlemen of the long robe, those of learned professions and contemplative studies, must, of necessity, at last take Sir Charles Scarborough's advice, as it is said, to the Duchess

of Portsmouth : “ you must eat less, or use more exercise, or take physie, or be sick.”

Those who have written about health have given many rules, whereby to know when any person has exceeded at a meal : I think there needs but this short one, which is : If any man has eat or drank so much as renders him unfit for the duties and studies of his profession (after an hour's sitting quiet to carry on digestion ;) he has overdone. I mean only of those of learned professions and studious lives ; for those of mechanical employments must take the body, the other part of the compound, into consideration. If tender people, and those of learned professions, would go by this rule, there would be little use for physie or physieians in chronieal eases. Or, if they would but eat only one part of animal food, at the great meal, and make the other two of vegetable food ; and drink only water with a spoonful of wine or clear small beer, their appetites would be a sufficient rule to determine the quantity of their meat and drink. But variety of dishes, the luxurious artfulness of cookery, and swallowing rich wine after every bit of meat, to lengthen out the appetite ; the fondness of mothers, and the cramming of nurses, have so stretched the capacities of receiving, that there is no security from the appetite among the better sort. It is amazing to think how men of voluptuousness, laziness, and poor constitutions, should

imagine themselves able to carry off loads of high seasoned foods, or inflammatory liquors, without injury or pain; when men of mechanic employments, and robust constitutions, are scarcely able to live healthy and in vigour to any great age, on a simple, low, and almost vegetable diet,

Since then our appetites are deceitful, and weight and measure troublesome and singular, we must have recourse to a rule independent of our sensations, and free from unnecessary trouble and pain. To answer which, I know nothing but eating and drinking by our eye; that is, determining first of all, either by weight or measure, or by particular observation or experiment, the bulk, or number of mouthfuls of flesh meat, and the number of glasses of strong liquors, under which we are best; and then by our eye determining an equal quantity at all times for the future: thus, the two wings of a middling pullet, or one wing and both legs; three ribs of a middling neck of mutton; two middling slices of a leg or shoulder, throwing away the fat and the skin; somewhat less of beef, may be sufficient for flesh meat, at the great meal; for we are so wisely contrived, that our food need not be adjusted to mathematical points: a little over or under will make no difference in our health. As for pork, and all kinds of hog's-flesh, I think they ought to be forbidden valetudinary and studious people, as they were the

Jews: they feed the foulest of any creature, and their juices are the rankest; their substance the most surfeiting, and they are the most subject to cutaneous diseases and putrefaction of any creature; insomuch, that in the time of a plague, or any epidemical distemper, they are universally destroyed by all wise nations, as the southern people do mad dogs in the hot months. The same censure I should pass upon all fish. Most fish live in a saltish element, and come only into fresh water rivers for the conveniency of bringing forth their young ones. This makes their parts more closely united and harder of digestion. Besides, as I have before observed, they feed upon one another, and their juices abound with a salt that corrupts the blood, and breeds chronical diseases. And it is always observable, that those who live much on fish are infected with the scurvy, cutaneous eruptions, and the other diseases of a foul blood. And every body finds himself more thirsty and heavy than usual after a full meal of fish, let them be ever so fresh; and is generally forced to have recourse to spirits and distilled liquors to carry them off; so that it is become a proverb among those that live much upon them, that brandy is latin for fish: besides, that after a full meal of fish, even at noon, one never sleeps so sound the ensuing night; as is certain from constant observation. These few hints may serve the

valetudinary person, in a gross manner, to judge by the eye the quantity of solid flesh meat he takes or ought to take down : for I judge the mentioned quantities to be rather a little under than over eight ounces. As to broths, soups, and jellies, if they be strong, I account them equal in nourishment and harder to digest than the same weight of solid flesh meat ; and three or four common spoonfuls, at most, make an ounce in weight in liquids ; and about double the number of bits commonly swallowed at once make the same weight in solid flesh meat ; for exactness is not here requisite.

Drink is the other part of our food. The common drink here in England is either water, malt liquor, or wine, or mixtures of these ; for eyder and perry are drank but in few places, and rather for pleasure and variety than common use. Without all peradventure, water was the primitive, original beverage, as it is the only simple fluid (for there are but three more in nature, mereury, light, and air, none of which is fit for human drink) fitted for diluting, moistening, and cooling ; the ends of drink appointed by nature. And happy had it been for the race of mankind if other mixed and artificial liquors had never been invented. It has been an agreeable appearance to me to observe with what freshness and vigour those who, though eating freely of flesh meat, yet drank nothing but this element, have lived in health, indolence, and

cheerfulness, to a great age. Water alone is sufficient and effectual for all the purposes of human wants in drink. Strong liquors were never designed for common use : they were formerly kept (here in England) as other medicines are, in apothecaries' shops, and prescribed by physicians to refresh the weary, to strengthen the weak, to give courage to the faint-hearted, and raise the low-spirited. Wine is now become as common as water ; and the better sort scarce ever dilute their food with any other liquor. And we see, by daily experience, that (as natural causes will always produce their proper effects) their blood becomes inflamed into gout, stone, and rheumatism ; raging fevers, pleurisies, small-pox, or measles ; their passions are enraged into quarrels, murder, and blasphemy ; their juices are dried up ; and their solids scorched and shrivelled. Those whose appetite and digestion is good and entire, never want strong liquors to supply spirits ; such spirits are too volatile and fugitive for any solid or useful purposes in life. Two ounces of flesh meat, well digested, beget a greater stock of more durable and useful spirits than ten times as much strong liquors, which nothing but luxury and concupiscence makes necessary. Happy those, whom their parents' natural aversion to strong liquors, or whom kind providence among the better sort, has brought to the age of maturity and discretion

without dealing in or desiring any great quantity of strong liquors : their passions have been calmer, their sensations more exquisite, their appetites less unruly, and their health more uninterrupted, than any other natural cause could have produced. And threë happy they, who continue this course to their last minutes. Nothing is more ridiculous than the common plea for continuing to swallow down large quantities of spirituous liquors ; viz. because they have been accustomed so to do, and they think it dangerous to leave it off all of a sudden. It were as reasonable for him that is fallen into the fire or water to lie there, because of the danger of removing him suddenly. For neither element will destroy him more certainly, before his time, than wallowing in strong liquors ; if the quantity of strong liquors they have been accustomed to, may be supposed prejudicial to their health, or to introduce noxious humours into the habit, the sooner a stop be put to it the better. No man is afraid to forbear strong liquors in an acute distemper, what quantity soever he might have drank in his health : and yet any sudden change of the humours would not only be more dangerous then, than at any other time ; but also would more readily happen and come to pass, in such critical cases. For the whole system of the fluids being in a fermentation, small changes or error then would not only be more fatal, but

more plain and obvious. And if a person be in hazard by such a sudden alteration, he cannot live long by taking down so much poison. But the matter of fact is false and groundless. For I have known and observed constant good effects from leaving off suddenly great quantities of wine and flesh meats too, by those long accustomed to both; am ready to name the persons, and never observed any ill consequence from it in any case whatsoever. Those whose constitutions have been quite broken, and running into dissolution, have lived longer, and been less pained in sickness by so doing: and those who have had a fund in nature to last longer, have grown better, and attained their end by it. I allow every man, that has been accustomed to drink wine, or strong liquors, a pint in twenty-four hours: and I am well satisfied that quantity is sufficient for health, let their custom have been what it will. Their spirits may indeed flag and sink a little at first, for want of introduced quick-lime and fire. But low spiritedness in such a case, I count no disease. And bearing it for some time, is bountifully recompensed by the health, indolence, and freedom of spirits they afterwards enjoy: not taking into consideration their being rescued from the tyranny of so immoral and mischievous a habit. It may be sufficient for those who are tender, studious, or contemplative, to drink three glasses of water with

Wine

a spoonful of wine at the great meal. And as Sir W. Temple has it, one for yourself, another for your friends, a third for good humour, and a fourth for your enemies, are more than sufficient after it.

A great mistake committed in this affair is, that most people think the only remedy for gluttony is drunkenness, or that the cure of a surfeit of meat is a surfeit of wine: than which nothing can be more false, or contrary to nature; for it is lighting, as the saying is, the candle at both ends. For, first of all, wine and all other strong liquors are as hard to digest, and require as much labour of the concoctive powers, as strong food itself. This is not only evident with respect to people of weak stomachs, but also from hence, that healthy people who drink only water, or weak small beer, shall be able to eat and digest almost double of what they could, did they drink strong liquors at their meals, as every one that pleases may experience. Water is the only universal dissolvent, or menstruum, and the most certain diluter of all bodies proper for food; though there are a great many that spirituous liquors will not only not dissolve, but will harden, and make more undigestible; especially the salts of bodies, wherein their active qualities, that is, those which can do most harm to human constitutions, consist. And I have known men of weak and tender constitutions, who could

neither eat nor digest upon drinking wine, who, by drinking at meals common water heated, have recovered their appetites and digestion, have thriven and grown plump. It is true, strong liquors, by their heat and stimulation on the organs of concoction, by increasing the velocity of the motion of the fluids, and thereby quickening the other animal functions, will carry off the load that lies upon the stomach, with more present cheerfulness ; yet, besides the future damages of such a quantity of wine to the stomach and to the fluids, by its heat and inflammation, the food is hurried into the habit, unconcocted, and lays a foundation for a fever, a fit of the cholic, or some chronical disease.

Another mistake, I shall observe, is the extreme fondness persons of the better sort here in England have lately run into, for the strong and high country wines. I can think of no reason for this, but the very honest one the vulgar give for drinking brandy : that they get sooner drunk on it ; for surely the middling lighter wines inflame the animal juices less, go more easily off the stomach, and afford more room for long conversation and cheerfulness. Excess in them gives less pain, and is sooner remedied ; but there are degrees in this matter. *Nemo repente fuit turpissimus*, (nobody becomes extremely bad all at once.) They begin with the weaker wines, these by use and habit

will not do, they leave the stomach sick and mawkish, they must fly to stronger wine, and stronger still, and run the climax, through brandy to Barbadoes waters, and double distilled spirits, until at last they can find nothing hot enough for them. People who have any regard for their health or lives, ought to tremble at the first cravings for such poisonous liquors: strong waters should never be taken but by the direction of a physician, or in the agonies of death; for, when persons arrive at that state, that they become necessary to their ease and freedom of spirits; they may be justly reckoned among the dead, both as to the short time they have to live, and the little use they can be of either to themselves or mankind. I speak not here of those who are under an actual fit of the gout, or cholick in the stomach. (We must not die for fear of dying.) Nor am I recommending sour verjuice or unripe wines; but I cannot help being well satisfied, both from reason and experience, that the light wines, of a moderate strength, due age, and full maturity, are much preferable for cheerfulness and conversation, much more wholesome for human constitutions, and much more proper for digestion than the hot and strong wines. The rich, strong, and heavy wines ought never to be tasted without a sufficient dilution of water; at least they should be used, like brandy or spirits, for a cordial, *i.e.* at most to

take but three small glasses of such. Whatsoever is more cometh of sin, and must be diluted with the waters of repentance.

I have no intention here to discourage the innocent means of enlivening conversation, promoting friendship, comforting the sorrowful heart, and raising the drooping spirits, by the cheerful cup and the social repast. Perhaps I may like the harmless frolic, the warm reception of a friend, and even the dulce furere itself, more than I ought : persons sober in the main, will receive little prejudice from such a fillip, when the occasions happen but seldom, and especially when they make it up by a greater degree of abstinence afterwards : but a sot is the lowest character in life. Did only the profligate, the scoundrel, the abandoned, run into these excesses, it were in vain to endeavour to reclaim them, as it were to stop a tempest, or calm a storm. But now that the vice has become epidemical, since it has not only got among mechanics and tradesmen, but among persons of the brightest genius, the finest taste, and the most accomplished parts ; and, (oh, that I could give my conscience the lie, in mentioning them !) even among the first and least fallen part of the creation itself, and those of them, too, of the most elegant parts, and the strictest virtue otherwise ; and, which is still the most surprising of all, even those, too, who are in all other respects blameless. Since I say the case

is so, it will not be amiss to shew, to the evidence of a demonstration, the folly as well as the fruitlessness of such a course ; a fit of the cholera, or the vapours, a family misfortune, a casual disappointment, the death of a child, or a friend, with the assistance of the nurse, the midwife, and the next neighbour, often give rise to or become the weighty causes of so fatal an effect. A little lowness requires drops, which pass readily down under the notion of physic ; drops beget drams, and drams beget more drams, until they come to be without weight and without measure ; so that at last the miserable creature suffers a true martyrdom, between its natural modesty, the great necessity of concealing its cravings, and the still greater one of getting them satisfied some how. Higher and more severe fits of hysterics, tremors, and convulsions, begot by these, bring forth farther necessity upon necessity, of drops, drams, and gills, until at last a kind dropsy, nervous convulsions, a nervous atrophy, or a colloquative diarrhœa, if not a fever, or a phrenzy, set the poor soul free. It has very often raised in me the most melancholy reflections, to see even the virtuous and the sensible bound in such chains and fetters, as nothing less than omnipotent grace, or the unrelenting grave could release them : they were deaf to reason and medicine, to their own experience, and even to the express words of scripture, that says, the drunkard shall not

enter the kingdom of heaven. Did this bewitching poison actually cure or relieve them, from time to time, something might be said to extenuate the folly and frenzy of such a course; but, on the contrary, it heightens and enrages all their symptoms and sufferings ever afterwards, excepting the few moments immediately after taking it down; and every dram begets the necessity of two more, to cure the ill effects of the first; and one minute's indolence they purchase with many hours of greater pain and misery, besides the making the malady more incurable. Low-spiritedness in itself is no disease; besides that there are remedies in art that will always relieve it, so long as there is any oil remaining in the lamp; and it is in vain to try to raise the dead. Exercise, abstinence, and proper evacuations, with time and patience, will continually make it tolerable; very often they will perfectly cure it. The running into drams is giving up the whole at once; for neither laudanum nor arsenic will kill more certainly, although more quickly. The pretence of its being physick, or a present remedy, is trifling. Cordials of any kind, even out of the apothecaries' shops, are but reprieves for a time, to gain a respite, until proper and extirpating remedies can take place; and are never to be used twice, the one immediately after the other, but in the last necessity; and, I can honestly say, I never failed of relieving (so as to make life

tolerable) vapourish, hysterical, or hypochondriacal persons, who would be governed in their diet, by the use of other proper means, if there was a fund in life, and no incurable disease, complicated with lowness. Thus much the weight of the subject forced from one: more than this, its disagreeableness hinders me to say.

Next to drams, no liquor deserves more to be stigmatized and banished the repasts of the tender, valetudinary, and studious, than punch. It is a composition of such parts, as not one of them is salutary, or kindly to such constitutions, except the pure element in it. The principal ingredient is rum, arrack, brandy, or malt spirits, as they are called, all of them raised by the fire, from the fermented juices of plants, brought from southern countries, or which have longest borne the heat of the sun in our own climate: and, it is observable, that every thing that has passed the fire, so that it has had due time to divide and penetrate its parts, as far as it possibly can, retains a caustic, corrosive, and burning quality ever afterwards; this is evident from the fiery and burning touch and taste of new drawn spirits, as also from the burning of lime-stone, which, though extinguished by boiling water, does ever after retain its heating and drying quality, as appears from the great use of lime-water, in drying up all humid sores, when given inwardly by itself, or compounded with sudorific woods and

roots, and from its success in outward applications for the same purposes. And though time may in some measure get the better of this, in its sensible and obvious operations; yet since water is a grosser body than fire, or flame, it never can penetrate it so far as quite to extinguish its inmost heat, especially if we consider that spirits are but an accumulation of fine salts and light oil, compacted together into the smallest volume; the first whereof is so hard and solid, as naturally to retain their heat the longest, into which water cannot enter: the other, viz., the oil, is so inflammable, that it most readily receives heat and fire, and defends the salts from the power of the water over them; and in the continued distillation of spirits, this action of the fire is so strong as to reduce them to liquid flames at last, which will of themselves evaporate in visible flames and fumes.

The other principal part of the composition is the juice of oranges and lemons; and if we consider that a lemon or orange could never be transported half seas over to us, without rotting or spoiling, if gathered when wholly ripe, we should have no great opinion of their juices. Every Spanish or Portuguese merchant can inform us that they must be gathered green, or at least a month before they are ripe, else they are not fit to be sent beyond the seas. The sea air, and their being shut up close, gives them that golden yellow colour we

so much admire. The juice of a crab-apple, of unripe grapes, or gooseberries, or even good juice of sorrel, would come up at least to their virtue of extinguishing the heat of spirits, if not to their flavour; and how kindly a guest such juices would be to the fine fibres of weak stomachs and bowels, I leave every one to judge. The truth is, all fermenting juices, such as these eminently are, must be highly injurious to weak constitutions; for, meeting with the crudities in the bowels, they must raise a new battle and colluctation there, and so must blow up the whole cavities of the human body with acrid fumes and vapours, the great and sore enemy of such bowels. And in the West Indies, where, from the necessity of drinking much, because of the violence of the heat, and from the want of proper liquors there, they are forced to drink much punch, though lemons and oranges be in their full perfection, they are universally afflicted with nervous and mortal dry belly-aches, palsies, cramps, and convulsions, which cut them off in a few days, entirely owing to this poisonous mixture.

If acids must be had, without all peradventure, the vinous ones are the best and safest. The Romans, though they had the vegetable acids in perfection, made very little use of them but in cookery, where the quantity of the poison was so small as not to do sufficient harm to forbid their using them, for the sake of the exquisite relish they gave

their sauces; and the constant drink of the lower soldiery was vinegar and water, which they found of excellent use, both as it prevented fevers, plagues, and putrefaction, and also as it gave an energy to the unactive element, and hindered it from lodging in the body. Hence also the great use of oxymel and oxycrate (that is, of vinegar with honey and with water) among all the ancient physicians; and, indeed, whenever they prescribed an acid, they very prudently joined a corrective with it, both to promote its good, and to prevent its bad effects. The two remaining ingredients are sugar and water, and these I will give up to the punch-drinkers, and allow them all the benefit of them they can bring to this composition; yet it will still have malignity sufficient remaining to be held in detestation (at least for any great use, or in any great quantity, for some poisons are so only by their quantity) by those tender and valetudinary persons who value health and life. The strong, the voluptuous, and the abandoned, need no advice, at least they will take none. I could never see any temptation, for any one in their senses, to indulge in this heathenish liquor, but that it makes its votaries the soonest, and all of a sudden the deepest drunk, holds them the longest in the fit, and deprives them the most entirely of the use of their intellectual faculties, and bodily organs, of any liquor whatsoever. It is likest to

opium, both in its nature, and in the manner of its operation, and nearest arsenic in its deleterious and poisonous qualities: and so I leave it to those,

“Who knowing this will yet drink on and die.”

Beer As to malt liquors, they are not much in use, excepting small beer, with any but mechanics and fox-hunters. The French very justly call them barley-soup. I am well satisfied a weak stomach can as readily, and with less pain, digest pork, and pease-soup, as Yorkshire or Nottingham ale. They make excellent birdlime, and when simmered some time over a gentle fire, make the most sticking, and the best plaster for old strains that can be contrived. Even the small beer that is commonly drank at London, if it be not well boiled, very clear, and of a due age, must be hurtful to persons of weak nerves and slow digestion; for, fermenting again in the alimentary channels, it will fill the whole cavity of the body with windy fumes and vapours, which will at length play odd pranks in a crazy constitution. In fine, the valetudinary, studious, and contemplative, must be contented with a pint of middling light wine a day, one half with, and the other without water.

Since the time foreign luxury has been brought to its perfection here, there are a kind of liquors in use among the better sort, which some great doctors have condemned, by bell, book, and candle,

and others have as extravagantly commended: I mean coffee, tea, and chocolate. For my own part, I take all their virtue to consist in custom, and all their harm in excess. As to coffee, it is a mere calx, or a kind of burnt horse-bean, but lighter on the stomach, and of somewhat a better flavour. The Turks use it and opium instead of brandy. But the plea that some make for running into excess in it, from this Mahometan custom, is altogether weak and groundless; for those that do so there suffer by it, as we do here; and those that debauch in it, turn stupid, feeble, and paralytic by it, especially when they join opium with it, as they frequently do, as those who wallow in these do here, and are as much despised and exposed by serious persons as our toppers and brandyswillers are here. A dish or two of coffee, with a little milk to soften it, in raw or damp weather, or on a waterish and phlegmatic stomach, is not only innocent, but a present relief. But it is as ridiculous, and perhaps more hurtful, at least in thin and dry habits, to dabble in it two or three times every day, as it would be for such to drink nothing but scalding lime-water. There are two kinds of tea in use, green and bohea. Mr. Cunningham, who lived several years in China, a very learned and accurate person, informs us, that they are both gathered from the same shrub, but at different seasons of the year; and that the bohea is gathered in the

spring, and is dried in the sun ; the green at the fire. But I suspect, and not without authority, that, besides these differences in drying, some infusion of another plant or earth (perhaps such a one as that of Japan earth, or catechu) must be poured on some sorts of bohea tea, to give it the softness, flavour, and heaviness on the stomach it has, whereby it becomes a mere drug, and wants the natural simplicity of green tea, which when light, and drank neither too strong nor too hot, I take to be a very proper diluent, when softened with a little milk, to cleanse the alimentary passages, and wash off the scorbutic and urinous salts for a breakfast, to those who live full and free; as also it, or tea made of a sliced orange or lemon, is one of the best promoters of digestion after a full meal, or when one is thirsty between meals, and much more safe and effectual than drams or strong cordials, which are commonly used for that purpose. Some persons, of weak tender nerves, fall into lowness and trembling upon using either of these liquors with any freedom, from their too great quantity, or their irritation on the tender and delicate fibres of the stomach. Such ought carefully to avoid and abstain from them, as from drams and drops. But I can never be of their opinion who ascribe the frequency of scurvy, vapours, low spiritedness, and nervous distempers now, to what they were in the days of our forefathers, to the custom of drinking

more frequently and freely of these foreign infusions. The cause is not adequate to the effect; nor indeed has any analogy to or connexion with it. We know that warm water will most of any thing promote and assist digestion in weak stomachs and tender nerves; and, by this alone, I have seen several such persons recover to a miracle, when cold mineral waters, bitters, cordials, and drams, have done rather hurt than good; and tea is but an infusion in water of an innocent plant: innocent, I say, because we find by its taste it has neither poisonous, deleterious, nor acrimonious qualities; and we are certain, from its use in the countries it comes from (which are larger than most of Europe), that they receive no damage from it, but on the contrary, that it promotes both digestion and perspiration. The argument, from its relaxing the coats of the stomach and bowels by its heat, is of no force; for unless it be drank much hotter than the blood itself, it can do no hurt that way; and we see the Bath guides, who dabble in water almost as hot as tea is ever drunk, a great part of the day, and for one half of the year at least, are no ways injured by it, except when they drink strong liquors too freely to quench the thirst it raises. However, I should advise those who drink tea plentifully, not to drink it much hotter than blood warm, whereby they will receive all its benefit, and be secure against all the harm it can

possibly do. As to chocolate, I am of opinion it is too hot and heavy for valetudinary persons, and those of weak nerves.

I have before observed, that nuts pass through the alimentary passages untouched ; and, though they may part with some of their more volatile particles, yet, I doubt if they can afford much nourishment to persons of weak digestions. Some say, chocolate gives them an appetite ; the meaning of which may be, that when they have a good appetite for their breakfast, it is not unlikely it may continue all the day ; but I am of opinion, it is a false and hysterical appetite, such as sharp wines and sharp humours in the stomach give. For fat and oily things, such as all nuts are, are hard to digest, and lie long in the stomach, for reasons I have already explained ; it may lubricate and sheath against the irritation of salt and sharp humours in the bowels, and therefore may be good in the cholics and gravel of those of strong and stout digestion ; but can never be good food for those of weak nerves and poor constitutions. Nothing is so light and easy to the stomach, most certainly, as the farinaceous or mealy vegetables ; such as pease, beans, millet, oats, barley, rye, wheat, sago, rice, potatoes, and the like ; of some of which on milk or water, I should ever advise the valetudinary, and those of weak nerves, to make their two lesser or secondary meals. To-

bacco is another foreign weed, much in use here in Britain ; though not among the best, yet among the middle and inferior ranks of the people : for those of gross and phlegmatic constitutions, who abound in serous and watery humours, who are subject to coughs, catarrhs, and asthmatic indispositions ; who labour under violent tooth-aches, or are troubled with rheums in their eyes ; who have cold and waterish stomachs, and live fully and freely, both smoking and chewing is a very beneficial evacuation, drawing off superfluous humours, crudities, and cold phlegm, provided they carefully avoid swallowing the smoke, or the juice ; and drink nothing, but rinse their mouths with some watery liquor after it, and spit it out. But to thin, meagre, and hectic constitutions, it is highly pernicious and destructive ; heating their blood, drying their solids, and defrauding the food of that saliva, which is so absolutely necessary towards concoction. Snuffing the leaves, or the grosser cut in a morning, will readily promote a flux of rheum by the glands of the nose ; and will be of some use, to clear the head and the eyes. But the ridiculous custom of perpetually sucking in sophisticated powders, and other foreign drugs sold for snuff, cannot but be prejudicial both to the eyes, and even to the stomach : at least, if we believe the reports of those who say they have brought it up from thence.

I have endeavoured to assist the reader with some observations and reflections, to enable him towards determining the quantity and quality of his solid food, necessary either to prevent or cure chronical distempers. It may not be amiss, here, to make some reflections also on the fit proportion of drink proper for that purpose : as the food is, so must that be, various and uncertain, with regard to the age, size, labour, and constitution of the person, and the season of the year. I have offered to limit the quantity of strong liquors, fittest to preserve health and lengthen out life in general, to a pound or pint, and that of the middling kind. But the sickly, the aged, and those who would cure a chronical distemper, must even abate of this quantity. The only remaining question is about the quantity of water, or watery liquors, proper to be mixed with this strong liquor, or drunk by itself : for in this also, though in itself harmless and innocent, yet there is a choice and preference ; because too much water will only serve to distend and swell up the vessels, and wash off some of the finer and more nutritious parts of the chyle ; and too little will not be sufficient to dilute the solid food, or to make the chyle thin and fluid enough, to circulate through the fine and small vessels. I will suppose my patient to deal in no other cookery but roasting and boiling ; and that he eats only fresh meat. Boiling animal food draws more of

the rank, strong juices from it, and leaves it less nutritive, more diluted, lighter, and easier of digestion. Roasting, on the other hand, leaves it fuller of the strong nutritive juices, harder to digest and wanting more dilution : those, therefore, who must have full grown and adult animal food, ought to eat it boiled, and well boiled too ; if their digestion be but weak. They who can live on young animal food, (which is best for weak stomachs,) ought to eat it roasted, but must lessen the quantity, in respect of the same food boiled ; but they must dilute it more : for as roast meat has a better flavour, and more nourishment, so it lies less flabby upon the stomach, and does not so readily slip from or disappoint the action of grinding, which has some share in digestions, both primary and subsequent ; but it will want more dilution, with a watery menstruum, to soften its more rigid and crisp fibres. If, therefore, the whole weight of the solid food, in twenty-four hours, be supposed a pound and a half, then three pounds of liquor, that is, one of strong liquor, and two of some aqueous fluid, will, in a medium, be sufficient to dilute it abundantly. For thus, there will be two particles of a fluid to one solid particle ; which, abating the solid parts thrown off by stool, will suffice to make the chyle abundantly thin, to circulate through all the fine channels, whose diameters are larger than that of the solid particle, the

principal end of its thinness and fluidity. More than this would but distend the vessels, and carry off the finer parts of the chyle by water or perspiration ; for we constantly find both these increased by an overdose of fluids ; and less would not sufficiently dilute their food. I should advise those, therefore, who have weak stomachs, or relaxed nerves, to mix their wine with the above-named quantity of boiled water, with a burnt crust, at least blood-warm, and to drink it after their meal is over, if they can do it with ease, rather than in the time of eating ; for the more spirituous and most nourishing parts of the food will readily run off, without much dilution ; and it will be the grosser and harder remaining part that will want it most. And if, some time after their great meal, they find their stomach loaded, the food rising, hard belching, heart-burning, or much yawning, to drink down and dilute it with milk-warm, light green tea, or warm water, rather than to run to drams and cordials, the usual, but most pernicious antidote in such cases. And upon great and heavy oppression, much trouble and great struggle in the digestion, to have recourse to carduus or chamomile flower tea, to bring it up, rather than to trespass in these poisonous and caustic liquors ; which, though they may at present lessen the suffering, and hurry on the first concoction ; yet make them dearly pay for it, when the unconcocted load of

crudities comes to pass by stool or perspiration, either in cholics, gripes, vapours, and oppression of spirits ; or by a general disability and rheumatic stitches and pains.

Upon the head of cordials, mentioned in one of the foregoing articles, I cannot forbear setting down one, whose virtues and efficacy I have long tried, and have never found it fail, when any thing would succeed : and I recommend it (to be kept by them) to all those who are liable to low spirits, faintings, oppressions, sickness at the stomach, headaches, and vapours ; and also to those who, wanting to exert themselves in any business of consequence, need a flow of spirits for some short time, for that purpose ; or, indeed, upon any sudden accident arising of its own accord, out of the habit itself ; I think it a kind of universal remedy, but never to be used but upon such occasions ; because, use may weaken it, if not extinguish its virtue. It is thus:—

Take of simple chamomile-flower water, six ounces ; compound gentian and wormwood waters, each an ounce and a half ; compound spirit of lavender, sal volatile, tincture of castor and gum ammoniac, dissolved in some simple water, each two drams ; tincture of snake-weed, and tincture of the species diambræ, each a dram ; the chemical oils of lavender, juniper and nutmeg, each ten drops,

mixed with a bit of the yoke of an egg, to make the whole uniform; assafoetida and camphor in a rag, each half a dram; but these may be left out by those to whom they are disagreeable.

Two, three, or four spoonfuls of this is a present help in such cases. It will keep six months good.

RULES FOR THE QUANTITY AND QUALITY OF FOOD.

The great rule of eating and drinking for health, is to adjust the quality and quantity of our food to our digestive powers. The quality may be judged by the following rules :—

Those substances that consist of the grossest parts are hardest of digestion; the constituent particles coming into more contacts, and consequently adhering more firmly.

These substances whose parts are brought together with the greatest force, cohere proportionably closer than those that come together with a smaller force.

Salts are very hard to be separated, because united by plain surfaces, under which they are always comprehended. And in the last stages of the circulation, where it is slower, shoot readily into larger elusters, and so are harder to be driven out of the habit. From these we may easily infer, that those vegetables and animals that come soon--

est to their full growth are easier of digestion than those that are longer of attaining the state of maturity—those that are the smallest of their kind, than the biggest—those of a dry, fleshy, and fibrous substance, than the oily, fat, and glutinous; those of a white substance, than those of a more flaming colour—those of a mild, soft and sweet, than those of a strong, poignant, aromatical, or hot taste—land-animals, than sea-animals—those animals that live on vegetables, or other light food, than those that live on other animals, or hard and heavy food—the nourishment nature has appointed for young animals, is lighter than the flesh of these animals themselves.

All crammed poultry and stall-fed cattle, and even vegetables forced by hot beds, tend more to putrefaction, and consequently are more unfit for human food, than those brought up in the natural manner.

Plain-dressed food is easier of digestion than what is pickled, salted, baked, smoked, or any way high-seasoned.

Strong men, those of large stature, and much labour, and the inhabitants of a cold and clear air, require more food than women, children, the weak, the sedentary, and the aged, and those that live in a warmer climate, or grosser air.

Nothing conduces more to health and long life than abstinence and plain food, with due labour.

Where exercise is wanting (as in studious persons) there is the greater need of abstinence ; for these, eight ounces of animal and twelve of vegetable food, in twenty-four hours, is sufficient.

Most chronic diseases proceed from repletion ; as appears from their being cured by evacuation.

Tender persons ought to use as much abstinence as they possibly can : and, if they neglect it, their only relief is from frequent stomachic and family purges.

A plain rule for judging of the quantity is, not to eat so much as indisposes for business.

A more sensible and readier one is, first by experience to find out how much fits one, so as to be lightsome and healthy under it, and ever after to judge the quantity by the eye ; nature requiring therein no mathematical exactness.

Pork and fish are not fit food for the studious and the tender.

Water is the most natural and wholesome of all drinks, quickens the appetite, and strengthens the digestion most.

Strong and spirituous liquors, freely indulged, become a certain though a slow poison.

There is no danger in leaving them off all at once ; the plea for continuing them being false and groundless.

The best strong liquor for weak and studious people is wine : the best quantity, a pint in twenty-

four hours; and the best way of drinking it is, three glasses with, and three without water.

The middling, light wines, fully ripe, and of a due age, are preferable to the strong wines.

Strong liquors do not prevent the mischiefs of a surfeit, nor carry it off, so safely as water, though they seem to give present relief.

The frequent use of spirits in drams and cordials, is so far from curing low spiritedness, that it increases it, and brings on more fatal disorders.

And even when they are diluted with water, in punch, the quantity taken down at once, and the addition of a corroding acid, produce equally pernicious effects in human constitutions.

Malt liquors (excepting clear small beer, of a due age) are extremely hurtful to tender and studious persons.

Coffee is only an infusion of a kind of calx, and has the effects of an absorbent medicine; and so may be of some service to watery stomachs, if moderately used.

Green tea is a good diluter of the food, as it is an agreeable, warm, small liquor; but bohea is too heavy for the stomach.

Chocolate (as all nuts are) is so heavy and hard of digestion, that it can never be fit for the stomachs of weak and tender people.

Smoking tobacco, without drinking after it, chewing or snuffing the gross cut leaf in a morn-

ing, are useful to phlegmatic constitutions ; but to dry and lean habits they are pernicious. Snuff is just good for nothing at all.

The proper quantity of watery liquors in twenty-four hours, for those that live regularly, is two pints, (as that of strong liquor is one pint) which is best drank warm, and rather after than in the time of eating.

The form of a cordial fit to be kept in private families, as a present and certain relief for sudden qualms, faintness, sickness or low spirits ; but never to be taken but in cases of necessity.

CHAPTER III.

OF SLEEP.

THE next general head in order, is our sleeping and watching. All bodies, by their actions upon one another, and by the action of the circumambient bodies, are liable to be impaired and wasted ; and all animal bodies, from an active and self-moving principle within them, as well as from the rubs of bodies without them, are constantly throwing off some of their superfluous and decayed parts ; so that animal bodies are in a perpetual flux. To restore this decay and wasting of animal bodies,

nature has wisely made alternate periods of labour and rest, sleeping and watching, necessary to our being ; the one for the active employments of life, to provide for and take in the materials of our nourishment ; the other, to apply those materials to the proper wasted parts, and to supply the expenses of living. And it seems as improper, in the order of nature, to disturb the animal functions in the time of sleep, by any other employment than that of the secondary concoctions (as they are called ;) *i. e.* the applying the nourishment to the decayed parts, to recruit the blood, perfect the secretions, and to lay up plenty of spirits, or (to speak more philosophically,) to restore the weakened tone of nervous fibres ; that is, in short, to restore the decays of watching and action ; this, I say, is as improper as it would be (were it possible,) to eat or drink, or make provision for the necessities of life, in the time of sleeping. From hence is evident the absurdity of heavy, various, and luxurious suppers, or of going to rest till many hours after such a meal ; which must otherwise break in upon the order of nature, and the due and appointed times of sleeping and watching. Wherefore, I advise the valetudinary, the studious, and the contemplative, either to make no suppers, or only of vegetable food ; and to take a due time for watching after them.

There is nothing more certain than that, (ab-

stracting from acute eases) our sleep is sound, sweet, and refreshing, according as the alimentary organs are easy, quiet, and clean. If any one, not suffering under any disease, is disturbed in his sleep, it is certain his stomach is filled with food or crudities; or his guts filled with wind, cholera, or superfluous chyle: and those restless nights, and the difficulty of going to sleep, which are generally ascribed to vapours, are entirely owing to these causes; though they be not so strong as to become sensible; for then pain is added to watching, and they are felt. And upon complaints of such restless nights, I never once failed, upon inquiry, of finding the true cause in the diet of the preceding day, or of some few days before; and constantly have discovered that some error in eating and drinking, either in quantity or quality, has produced them. I have been astonished to see hypochondriacal and hysterical people restless all night, tossing and tumbling till towards morning, then dropping asleep till late hours, awake heavy, oppressed, and unrefreshed, complain of being hag-ridden, tired, and wearied, as if they had been whipped, spurred, lashed, and beaten through all the watches of the night; rise with foul mouths, and white tongue, belchings, yawnings, coughing, spitting, or retching and heaving, without appetite, spirits, or life, all the day-time; begin to live and breathe, become cheerful and hungry about

ten, eleven, or twelve o'clock at night ; eat a hearty, various, and luxurious supper ; drink an enlivening cup of the best, become as merry as crickets, and long to sit up later ; at last, tumble to bed, and repeat the same farce over again. The reason of all this complaint is the load on the stomach, that will not suffer them to rest till it is got off. The sharp and crude humours, twitching and twinging the nervous fibres, and coats of the bowels, become like so many needles and pins, constantly running through them ; though not always with sensible pain : the unconcocted chyle stopping or circulating slowly first in the bowels, then in the smaller vessels, begets these convulsions, flatus, night-mares, and oppressions of spirits. So that the secondary digestions are not over till next evening, (hence their want of appetite ;) and when these are finished their stomachs come, and their spirits flow ; and thus the perpetual round is carried on. Did they but follow the dictates of nature, go to bed for some days with a light vegetable or no supper at all, and bear the inconveniences thence arising ; their appetites would come in due season, and they would quickly find the truth of the aphorism of the schola salernitana.

“Somnus ut sit levis, sit tibi canæ brevis.”

“That your sleep may be sweet, let your supper be light.”

The seasons for sleeping, and watching, which

nature seems to point out to us, at least in these our climates near the tropic, are the vicissitudes of day and night. Those damps, vapours, and exhalations, that are drawn up into the higher regions, and are so rarified by the heat and action of the sun, as to become innocent or very weak in the day-time ; are condensed, sink low, near the surface of the earth, and are perpetually dropping down in the night-season ; and consequently, must be injurious to those tender persons that unnaturally watch in that season ; and must necessarily obstruct the perspiration, which the activity of watching, and the motion of labour promotes. I have already shewn, that our bodies suck^d and draw into them the good or bad qualities of the circumambient air, through the mouths of all the perspiratory ducts of the skin ; and if we were to view an animal body with a proper glass, it would appear with an atmosphere quite round it, like the steam of a boiling pot. Now we may easily conceive what injury a constitution may receive, not only by stopping such a perpetual discharge of superfluities, but also by forcing into the habit, by the air's weight and pressure, those noxious fumes and vapours that are perpetually falling near the surface of the earth, in the night-time. Your true toppers are so sensible of this, that by observation they have gathered it to be more safe for their health, and better for prolonging their

lives, to get drunk betimes and go to bed, than to sit up and be sober.

On the contrary, the heat of the sun, in the day-time, by its action on human bodies ; the very light, and free air, and the motions of things about us, disturbing the quiet of the air, must necessarily disorder the equable course of the perspiration, the tenor of the secondary concoctions, and the tranquillity of the spirits so necessary to rest and quiet : so that nothing seems more directly pointed out to us by nature, than the day for labour, and the night for rest ; and this without taking into consideration the necessity of the sun's light, for the ends of labour, and providing the necessities of life. Some animals, that are exceeding tender, are directed by nature to alternate periods of watching and rest, not twice in twenty-four hours, but twice in the year, viz. summer and winter, such as swallows, bats, and many sorts of insects, who sleep all the winter, and watch all the summer. So consistent is nature, in appointing the brightest and most enlightened parts of our lives for action, and the darkest and most inclement for rest. Not but that robust constitutions (as well as animals fitted by nature for different ways of living) may by custom get the better of these natural appointments ; but I write for the valetudinary, the studious, and the contemplative.

I advise all such, if they would preserve their health and lengthen out their days, to avoid as much as is possible evening dews, nocturnal studies, and unseasonable watching; in summer to go to bed a little after sun-down, and in winter to rise at least by break of day. Those who live temperately, will necessarily sleep but little; but to recompence that, their sleep will be much more sound, refreshing, and fruitful of cheerfulness and free spirits, than that of those who live more freely; for, as I have before said, the quantity of sleep will always be in proportion to the quantity of eating and drinking. Valetudinary, studious, and contemplative people, ought to go to bed by ten at farthest, and rise by four, five, or six, by which they will have eight hours in bed; and that is sufficient for any person, not under an acute, or the sharp fits of a chronical distemper.

Nothing can be more prejudicial to tender constitutions, studious and contemplative persons, than lying long in bed, after one is distinctly awake, or has slept a due and reasonable time: It necessarily thickens the juices, enervates the solids, and weakens the constitution. A free open air is a kind of a cold bath, especially after rising out of a warm bed; and consequently makes the circulation brisker and more complete, and braces up the solids, while lying in bed dissolves and

soaks in moisture. The erect posture, and the activity of watching, make the perspiration more plentiful, and the gross evacuations more readily thrown off. This is evident, from the appetite and hunger those that rise early feel, beyond that which they get by lying long in bed. Add to all these the influence of the fresh, benign, morning air; the retreating of all the noxious damps and vapours of the night, together with the clouds and heaviness that are thrown upon the brain from sleep; and, lastly, that cheerfulness and alacrity that is felt by the approach, or presence, of that glorious luminary the sun, which adds a new force to the heart, and gives a spur to the lagging and jaded spirits.

All nations and ages have agreed that the morning season is the proper time for speculative studies, and those employments that most require the faculties of the mind. For then the stock of the spirits is undiminished, and in its greatest plenty; the head is clear and serene, the passions are quieted and forgot; the anxiety and inquietude that the digestions beget in the nervous system, in most tender constitutions, and the hurry the spirits are under after the great meal, are settled and wrought off. I should advise, therefore, those who are of a weak relaxed state of nerves, who are subject to hypochondriacal or hysterical disorders, whose professions lead them to much use of

their intellectual faculties, or who would indulge speculative studies, to go early to bed, and to rise betimes ; to employ their morning hours in these exercises till eleven o'clock, then to take some agreeable breakfast of vegetable food ; to go on with their studies and professions till three, four, or five, as their spirits will hold out, and then to take their great meal of animal food ; all the rest of the day to throw off all study and thought, divert themselves agreeably in some innocent amusement, with some gentle bodily exercise ; and as soon as the digestion is over, to retire and provide for going to bed, without any farther supplies, except it be a glass of fair water, or warm sack-whey. But the aged and sickly must go sooner to bed and lie longer, because age and sickness break rest, and the stiffened and hardened limbs of the ancient become more pliant and relaxed by much sleep, a supine posture, and the warmth of the bed.

RULES RESPECTING SLEEP.

The valetudinary, the sedentary, and the studious, should eat very light, or no supper ; if any, it ought to be vegetable food ; neither ought they to go soon to bed after any supper whatsoever.

Going to bed on a full stomach, and wind and crudities somewhere in the alimentary passages, is

the cause of the want of due rest, which is sound and refreshing, always in proportion to the emptiness and cleanness of these passages, and their vacation from their proper office of digestion : and this is the cause of the want of kindly and refreshing rest, in hypochondriacal and hysterical people.

Watching by night, and sleeping by day, is of the most pernicious consequence to health and long life ; and plainly contrary to the indications of nature and the constitutions of our bodies.

The valetudinary, sedentary, and studious, ought carefully to avoid evening dews, nocturnal studies, and unseasonable watching ; go to bed by nine or ten, and rise proportionably by four, five, or six ; unless actually under a fit of sickness.

Nothing is more prejudicial to tender constitutions, than lying long in bed, indulging a lethargical and drowsy sleep, or lolling or loitering awake ; as appears by their heaviness, and want of appetite, upon doing so ; and their good stomachs, cheerfulness, and freedom of spirits, when they rise early.

The most advantageous manner for the tender, sedentary, and studious, to bestow their time, on account both of their health and studies, is to go early to bed, rise betimes, go about their studies till eleven, taking a light vegetable breakfast : prosecute them till about four in the afternoon, then to take their great meal of animal food, and after

that to employ the rest of their time in some innocent amusement, or gentle bodily exercise; to retire betimes, to prepare for going to bed, taking no farther nourishment, except a draught of water, or warm sack-whey, which will be particularly useful to those who labour under the stone and gravel.

CHAPTER IV.

OF EXERCISE AND QUIET.

WE proceed, in the next place, to the consideration of exercise and quiet, the due regulation of which is almost as necessary to health and long life as food itself. Whether we were so made before the fall, as to live in entire health, in a rigidly sedentary and contemplative life, is a speculation of no great consequence, nor easily determined in our present situation; for there is no certain analogy between things as they now are, and as they might have been then. As there happened an entire revolution in the complexion and qualities of the minds of the first pair; so, to me, there appear to be evident indications of a designed change and alteration of the material world, and the nature of the animals and vegetables which

subsist on this globe, from what they were when God pronouned every thing good that he had made. Nor seem the celestial bodies to have escaped, so far as they regard us. Whatever be in this, the passage where God tells Adam, "That in the sweat of his brow he shall eat bread," seems to be the injunction of a salutary penance ; that is, not merely a punishment, but also a remedy against the disorders his body would be liable to in this new state of the creation, and against the poisonous effects of the forbidden tree he had eaten the fruit of. I am the more confirmed in this belief, that I observe the absolute necessity of labour and exercise to preserve the body any time in due plight, to maintain health, and lengthen out life. For let whatsoever diet be pursued, however adjusted, both in quantity and quality, let whatever evacuations be used to lessen the malady, or any succedaneum be proposed, to prevent the ill effects, our bodies are so made, and the animal economy now so contrived, that without due labour and exercise, the juices will thicken, the joints will stiffen, the nerves will relax, and on these disorders chronic distempers and a crazy old age must ensue. Nor is this necessary only in the colder climates, and where the food is gross, but even in the warmest climates, and where the food is lightest. For though the warmth of the air may keep the perspiration free and open, or

rather, where it is very great, promote sweating ; yet, at the same time, and by consequence, it will thicken the fluids, and relax the fibres ; to prevent which, exercise is absolutely necessary : but in such a climate it ought to be gone about in the cool of the day. And though light food may, in a great measure, prevent the thickening of the fluids, yet it cannot do it sufficiently without exercise ; nor can it at all keep the fibres in due tension ; for to that purpose exercise is absolutely necessary. Nay, the joint power of warm air and light food cannot supply the place of exercise in keeping the joints pliant and moveable, and preserving them from growing resty and stiff.

Of all the exercises that are or may be used for health (such as walking, riding on horseback, or in a coach ; fencing, dancing, playing at billiards, bowls, or tennis ; digging, working at a pump, ringing a dumb bell, &c.) walking is the most natural, as it would be also the most useful, if it did not spend too much of the spirits of the weakly. Riding is certainly the most manly, the most healthy, and the least laborious, and expensive of spirits, of any ; shaking the whole machine, promoting an universal perspiration and secretion of all the fluids (to which may be added, the various changes of the air, through which they so quickly pass, every alteration of which becomes, as it were, a new bath), and thereby, variously twitching the

nervous fibres, to brace and contract them, as the new scenes amuse the mind. Those who cannot ride, must be carried in a coach or litter, which is the best exercise for the lame and crazy, and the only one proper for old and decrepid persons, as well as those that are so young that they are not able to manage their own exercise. The home exercises, such as playing at tennis and billiards, dancing, fencing, and the like, ought to be followed only when the season forbids being abroad ; for being in the air contributes much towards the benefit of exercise. It is beautiful to observe that earnest desire planted by nature, in young persons, to romp, jump, wrestle and run, and constantly to be pursuing exercises and bodily diversions that require labour, even till they are ready to drop down ; especially the healthier sort of them ; so that sitting, or being confined, seems to be the greatest punishment they can suffer, and imprisoning them for some time will much more readily correct them than whipping. This is a wise contrivance of nature ; for, thereby, their joints are rendered pliable and strong ; their blood continues sweet, and proper for a full circulation ; their perspiration is free, and their organs stretched out, by due degrees, to their proper extension.

It is also very agreeable to observe, how the several different organs of labouring men are strengthened and rendered brawny and nervous

as they happen to be most employed in their vocations, let them be otherwise ever so small or weakly. The legs, thighs, and feet of chairmen ; the arms and hands of watermen ; the backs and shoulders of porters grow thick, strong, and brawny by time. It is certain, that speaking strong and loud, without overstraining, will strengthen the voice, and give force to the lungs. Our nails and hair, the more they are cut and shaved, the more they grow. And we may promote any one evacuation so far, as to weaken and starve all the rest. Using any organ frequently and forcibly, brings blood and spirits into it, and so makes it grow plump and brawny. And if due pains were taken by the labour proper to them, the organs of all the functions of the animal economy might be strengthened and kept in due plight.

Therefore, to the asthmatic, and those of weak lungs, I should recommend talking much and loud, even by themselves, walking up an easy ascent, and when any degree of weariness warns them, to sit and rest, till they are easy, and then to return to their walking again, and so to increase it every day, till they are able to walk a reasonable distance in a reasonable time. To those who have weak nerves and digestion, and to those who are much troubled with headaches (most of all which arise from the ill state of the stomach and bowels), I should recommend riding on horseback as much

as possibly they could, in the clearest and driest air, and to change the air daily, if possible. To those who are troubled with the stone or gravel, to ride much over rough causeways in a coach. To those that have rheumatic pains, to play at billiards, tennis, or cricket, till they sweat plentifully, and then go immediately into a warm bed, and drink liberally of some warm thin liquor, with ten drops of spirit of sal ammoniac or hartshorn in each draught, to encourage the sweating. To those who have weak arms or hams, playing two or three hours at tennis or foot-ball every day. To those who have weak backs or breasts, ringing a bell, or working at a pump. Walking through rough roads, even to lassitude, will soonest recover the use of their limbs to the gouty; though riding on horse-back or in a coach will best prevent the distemper. But the studious and the contemplative, the valetudinary, and those of weak nerves, if they aim at health and long life, must make exercise a part of their religion, as it is among some of the eastern nations, with whom pilgrimages, at stated times, are an indispensable duty, and where mechanical trades are learned and practised by men of all ranks. Those who have their time in their own hands, ought to have stated seasons for riding or walking in a good air, as indispensable as those for going to dinner, to bed, or to church. Three hours for riding, or two for walking, the one half

before the great meal, and the other before going to bed, is the least that can be dispensed with; as the first part begets an appetite, the second helps on the digestion. Those who are not masters of their own time, must take it when they can; but to be sure they ought to let no opportunity slip of taking it.

There are three conditions of exercise to make it the most beneficial that may be: first, that it be upon an empty stomach (as, indeed, that is the proper time for all medicinal evacuations), for thereby the now concocted crudities, or those superfluities nature would be rid of, and has fitted, by going through the proper secretions, for being ejected, but cannot throw off without foreign assistance, will be readiest discharged. For, on a full stomach, exercise would be too tumultuous, precipitate the secretions, and throw off the sound juices with the corrupted humours. Secondly, that it be not continued to downright lassitude, depression of spirits, or a melting sweat. The first will wear out the organs, the second spend the strength, and the third will only do violence to the natural functions. Thirdly, due care is to be had, after exercise, to retreat to a warm room and proper shelter from the injuries of the weather, lest sucking into the wasted body the nitrous particles of the circumambient air, they should inflame the blood, and produce a rheumatism, fever, or

cold. I might add a fourth condition, joining temperance to exercise, otherwise the evil will be as broad one way as it is long the other; for since exercise will create a greater appetite, if it is indulged to the full, the concoctive powers will be as unequal to the load as they were before. But I pass that over, having sufficiently treated this subject already.

Under this head of exercise, I cannot forbear recommending cold bathing; and I cannot sufficiently imagine how it should ever have come into such disuse, especially among Christians, when commanded by the greatest lawgiver that ever was, under the direction of God's Holy Spirit, to his chosen people, and perpetuated to us in the immersion at baptism by the same Spirit, who, with infinite wisdom in this, as in every thing else that regards the temporal and eternal felicity of his creatures, combines their duty with their eternal happiness. First, the necessity of a free perspiration to the preservation of health is now known to every body, and frequent washing the body in water cleanses the mouths of the perspiratory ducts from that glutinous foulness that is continually falling upon them, from their own condensed dewy atmosphere, whereby the perspiration would be soon obstructed, and the party languish. Secondly, the having the circulation full, free, and open, through all the capillary arteries, is of great benefit

towards health and long life. Now nothing promotes that so much as cold bathing; for by the violent and sudden shock it gives to the whole system of the fluids, from the circumference inward towards the centre, and the fluids (because re-action is always equal and contrary to action) springing back again from the centre to the circumference, a force is raised almost ever sufficient to break through all the dams and obstructions of the smallest vessels, where they mostly happen, and to carry the circulation quite round. Thirdly, nothing is so injurious, and so much prevents the benefit of exercise to weak and tender constitutions, as sucking into their bodies the nitrous and humid particles of the air, that is, catching of cold. Now, nothing so effectually prevents this as cold bathing, as the nature of the thing shews, and experience confirms; for if exercise to attenuate the juices and strengthen the solids, be added to cold bathing, a new spring and force will be given to the blood, both to drive out these foreign and noxious mixtures, and to unite the cuticular scales, which form the scarf-skin, so as to strengthen it for the future against such violent entries.

I should advise, therefore, every one who can afford it, as regularly to have a cold bath at their house to wash their bodies in, as a bason to wash their hands; and constantly two or three times a week, summer and winter, to go into it; and

those that cannot afford such conveniency, as often as they can, to go into a river or living pond to wash their bodies : but this ought never to be done under the actual fits of a chonical distemper, with a quick pulse, headache, weak lungs, or a foul stomach ; nor ought they to stay in till they are over-chilled. And in winter, they ought to pursue their exercises immediately after they come out ; and those of tender nerves ought to pour basons of cold water on their head, or wash it well with a dripping sponge before they go in. I cannot approve the preeipitant way of jumping in, or throwing the head foremost into a cold bath ; it gives too violent a shock to nature, and risks too much the bursting some of the smaller vessels. The natural way is, holding by the rope, to walk down the steps as fast as one can, and when got to the bottom, bending the hams (as women do when they curtsey low) to shorten their length, so as to bring their heads a good way under water, and then popping up again to take breath ; and thus alternately for two or three times, and out again, rubbing and currying well before they are dressed. And this brings me to say something of another kind of exercise.

The flesh brush is an exercise most useful for promoting a full and free perspiration and circulation ; almost every body knows what well currying will do for horses, in making them sleek and

gay, lively and active; even so much as to be worth half the feeding. This it can no otherwise effectuate, than by assisting nature to throw off, by perspiration, the grosser parts of the juices which stop the full and free circulation, and by constant friction, irritation, and stimulation, to elicit blood and spirits to the parts most distant from the seat of heat and motion, and so to plump up the superficial muscles. The same effect it would produce in other animals, even human creatures themselves, if they were managed in the same manner, with the same care and regularity. I should think it, therefore, well worth the pains of persons of weak nerves and sedentary lives, especially those threatened with paralytic disorders, to supply the want of exercise of other kinds, with spending half an hour, morning and night, in currying and rubbing their whole body, more especially their limbs, with a flesh brush. And it is a wonder to me, that luxury has not brought cold bathing and currying in use, upon the animals (especially those of them upon whom they can be so readily made use of, such as oxen, pigs, veal, lamb, and all poultry, which naturally delight in cold bathing) which are brought to the table. For certain it is, that cleanliness and due exercise would much contribute to make all animals whatsoever, without exception, healthier in themselves, fuller of juice and spirits, and consequently better food for human creatures.

As to quiet, the conditions of exercise being determined, there needs nothing to be said of it.

RULES TO BE OBSERVED RELATING TO EXERCISE
AND QUIET.

Whatever was the original constitution of man, in our present state, a due degree of exercise is indispensibly necessary towards health and long life.

Animal food and strong liquors seem not to have been designed for man in his original make and frame ; but rather indulged, to shorten the antediluvian length of life, in order to prevent the excessive growth of wickedness.

Walking is the most natural and effectual exercise, did it not spend the spirits of the tender too much. Riding on horseback is less laborious and more effectual for such. Riding in a coach is only for the infirm and young children. House exercises are never to be allowed, but when the weather or some bodily infirmity will not permit going abroad ; for air contributes mightily to the benefit of exercise. Children naturally love all kinds of exercise, which wonderfully promotes their health, increases their strength, and stretches out their organs.

The organs of the body that are most used always become strongest, and therefore we may strengthen any weak organ by exercise.

The lungs are fortified by loud talking, and walking up an easy ascent. The digestion and the nerves are strengthened, and most headaches cured, by riding; the stone and gravel eased by, riding in a coach over rough ground; rheumatic pains by playing at tennis, billiards, &c. till one sweat, and then going to a warm bed, to promote the sweating; feeble arms by playing at shuttlecock or tennis; weak hams by foot-ball; and weak backs by ringing or pumping. The gouty best recover the use of their limbs by walking in rough roads; but prevent the fits best, by riding on horseback, or in a coach. The valetudinary, and the studious, ought to have stated times for exercise, at least two or three hours a day, the one half before dinner, the other before going to bed.

Exercise.—1. should always be gone about with an empty stomach : 2. Should never be continued to weariness : 3. After it, one must take care not to catch cold. And it should always be accompanied with temperance, else, instead of a remedy, it will become an evil.

Cold-bathing is of great advantage to health; but should not be used under a fit of a chronical distemper, with a quick pulse, or with a headache, or by those that have weak lungs. It promotes perspiration, enlarges the circulation, and prevents the danger of catching cold. Those of tender nerves should pour water on their heads before

they go in, and none ought to jump in suddenly, and with their heads foremost.

The flesh-brush is a most useful exercise, as appears by its advantage to horses, and ought not only to be used on human bodies, but also on such of the animals we design for our food, as it can be applied to.

CHAPTER V.

OF EVACUATIONS AND THEIR OBSTRUCTION.

THE three principal evacuations are, by stool, by water, and by perspiration. All these must be duly regulated, and in the order of nature, towards the preservation of health and the prolonging of life. The first ought to be of due consistence, between both extremes. *Oportet sanorum sedes esse figuratas.* Those who are costive, have either overheated their bodies with strong liquors; have eaten too sparingly, have too slow a digestion, or the peristaltic motion of their guts are too weak, whereby the food staying too long a time before the mouths of the lacteals is over-drained of its moisture. Those who have purging stools have eat too much, or of things too strong for their concoc-tive powers. For superfluous nourishment leaves

too much chyle in the fæces, which fermenting in the guts, stimulates them so as to become a purge. I have often observed, that a full meal of strong meat, as fish, beef, pork, baked meat, or made-dishes, in tender persons, goes off with the hurry and irritation of a purge, leaving the bowels inflated, licked, or griped, and the spirits sunk to the last degree. The food, by its various mixture, weight, and fermentation, stimulating all along from the stomach to the rectum, and being scarce ever drained of its chyle, without affording any nourishment to the body, runs off thus crudely, and becomes equal to a total abstinence from food for a long time. And hence we have a most infallible rule, *à posteriori*, to judge if we have governed ourselves in our diet in proportion to the neccssities of nature, and the forces of our concoctive powers. This is the very reason why the bark over-dosed, and given to persons of weak digestion, so constantly purges them; and why mercury, given either inwardly, or by friction, runs off in violent purging, and cannot be raised into a salivation; to wit, the not adjusting the doses to the strength of the stomach and nervous fibres. For the bark naturally binds, and mercury naturally rises to the most pervious glands. And in this sense, I myself have frequently observed, in weak and scrofulous bowels, even diascordium and Venice treacle to purge. Whereas, had the

doses been duly proportioned, or had they begun by under-dosing, and taken a little longer time, their end might have been effectually answered; as I have often experienced without ever failing.

And here it may not be amiss to take notice of a fatal mistake those run into, who, being weakly, thin, and slender, aim, by all means, and at any price, to become plump and round, and, in order to attain this, are perpetually devouring huge quantities of high, strong food, and swallowing proportionable measures of generous liquors, not knowing, that by this very method they promote and confirm the disease they would remedy; for in such persons and cases, the globular part of the blood is constantly of a small quantity, and very gluey, and the serous part thin and watery, (that is, the blood is poor and weak) and the solids or nerves are loose and relaxed; and the concoctive powers being in proportion to these two, of consequence, the digestions must be weak and imperfect, and their force unable to dissolve and break any quantity of such strong meat or spirituous liquors into a proper chyle for nourishment. And this great load must either be hurried off entirely through the alimentary ducts, in supernumerary discharges, or the small portion of chyle drawn out of it, being too gross to unite and make a similar fluid with the mass of the blood, must be preeipitated through the other drains of the body; and

thus the poor thin creature must starve in luxury, and waste amidst superfluity. The case is the same with nurses and parents in rearing up young children. The perpetual gripes, cholics, loosenesses, hard-bellics, choakings, wind, and convulsive fits, which torment half the children of England, are entirely owing to the too great quantities of too strong food, and too rank milk, thrust down their throats by their over-laying mothers and nurses. For what else do their slimy, their grey or chylous, their blackish and choleric discharges, the noise and motion in their bowels, their wind and choakings imply, but crudities from superfluous nourishment; this is so certain, that they are universally and infallibly cured by testaceous powders, which only absorb sharp crudities, by rhubarb purges, which at once evacuate and strengthen the bowels, and by milk-clysters, issues, and blisters, which are still upon the foot of evacuation; by obstinately persisting in these, and the like (intended to evacuate and strengthen the alimentary passages), and a thin, spare, and nutritive diet. Nothing nourishes but food duly concocted; and, in the course of nature, we must first plump up and extend, and then harden and strengthen. This is the way of nature in vegetation. And thus the animal creation, devoid of reason, rear up their young; and thus even the skilful groom treats his wasted and decayed horse; and, (which is wonder-

ful) you shall find a sagacious horse-doctor plump up and fatten a rotten, lean, broken-winded jade, and make him look sleek, gay, and lively, so as to cheat not only the esquire, but his brother doctor, in fewer weeks than all the man-doctors in England could rear up their fellow-creatures in years. It is true, the juices of men are more variously, and more thoroughly corrupted, and their solids entirely broken, which never happens to the brute creation. But the greatest mistake lies in the neglect of duly observing, and religiously prosecuting, a proper regimen. This must principally consist in a diet of soft, light, tender, cool, and mucilaginous foods, or such as are already become chyle either by nature or art, such are milk, and milk-meats, rice, sago, barley, wheat, eggs, broths, light soups, jellies, white, young, tender, and well-fed poultry, or butchery-meat, eaten little at a time, and often, not without an appetite, nor to satiety ; joining to these, the other helps and assistances mentioned in this treatise. When flesh is once come, it is easy to make it strong and hardy, by due exercise, and a gradual adventuring upon higher foods, and more generous liquors.

I have often heard valetudinary and tender persons, and those of sedentary lives and learned professions, complain of headaches, sicknesses at the stomach, cholies, and gripes, lowness of spirits, wind and vapours, and yet pretend they were very

moderate and abstemious in their eating and drinking ; but, upon enquiry, I constantly found these very persons pursued with purging stools, which was an evident proof, to me, that they had taken down more than they wanted, or could digest. For, it is universally certain, that those that do not exceed, must have either costive, or, at least, stools of a middle consistence. There is nothing more ridiculous than to see tender, hysterical, and vapourish people, perpetually complaining, and yet perpetually cramming ; crying out, they are ready to sink into the ground, and faint away, and yet gobbling down the richest and strongest food, and highest cordials, to oppress and overlay them quite. Fresh and generous food, mixing with the sharp humours of the stomach and bowels, may, for some short time, qualify and abate their irritation, and may give a fillip to the sluggish circulation, and become, as it were, a cork to stop the perpetual fuming up of these noxious steams upon the head and brain : but this is (pardon the similitude) as if one should go to quench the pestilential steams of a common sewer, by throwing in greater heaps of ordure and nuisance into it. The proper remedy in this case is, first, to cleanse the fœtid abyss, and then to preserve it clean by cutting off all the inlets of putrefaction. This will require a little courage, labour and pain ; but the future ease and sweetness will more than abundantly recompense them ; for

there is nothing more certain, than that of those born sound here in England, the headaches, stomach-aches, cholics, and nervous pains and disorders, universally proceed from idleness and fulness of blood.

Those who eat but one moderate flesh meal a day, will have regularly a discharge of the remains of their food. And, generally speaking, those that go oftener, have exceeded somehow. Those who pretend to cure themselves of nervous disorders, or any other chronical diseases, or preserve themselves from them, or lengthen out their days, must under-dose themselves (and therefore can go but once in two days), even though they should undergo the pain of costiveness. For it is impossible the nerves of those who have slippery bowels, should ever be braced or wound up; for there the cure must begin, where the evil began; and must be communicated thence to the rest of the system, as a rope-maker begins the twist at one end of the rope, and communicates it to all the other parts. Our access to the nerves of the stomach and bowels is obvious and open; to the rest, the way is difficult and far about. And, since a relaxation, weakness, and want of spring in the fibres, is the origin of all nervous distempers, no medicines, but such as contract, stiffen, wind up, and shorten them, can remedy this evil; and they must necessarily contract and bind up the fibres of the stomach and guts,

as the parts they first approach and exert their virtue upon. And he who, without firm bowels, thinks to cure a nervous distemper, labours as much in vain as he who would keep a fiddle-string soaking in oil and water, to make it vibrate or play off a fine composition of music.

By experience and observation I have found, that in those who have one regular discharge in twenty-four hours, the time of the progress of the food from the stomach, till its remains are thrown off, is three natural days. And in those who go but once in two days, the time is six natural days. The curious may be satisfied in this, by swallowing an almond or any other nut, which passes without being broken, or making any irritation. The reason is this, that a smaller quantity of food is retained longer by their suction, at the mouths of the lacteals, to drain it entirely of its chyle, and its weight being less, the concoctive powers have the greater force upon it, and so it is retained till it is perfectly digested, and drained of all its humidity; whereby such persons become costive ! whereas the contrary causes in people that exceed, precipitate the course of the aliment, and so leave the bowels always slippery. And nothing can more demonstratively shew an excess, and the lubricity of the discharge; and I have often observed in tender persons, and those of weak nerves, when a meal (I mean only of those who eat flesh meat but once

a day) has been a little too hard for the stomach, though the spirits have been full and free, and the health equal and good, by duly proportioned meals for two preceding days ; the third day, when the gross meal came off, they have been full of wind and vapours, their eyes dim, and their heads heavy, with flying rheumatic pains over the body, and cholic gripes. From whence we may draw these three conclusions.

First, it requires the same time for the uncocted chyle of a gross meal to run the circle of the habit, and the feculent remains to pass through the guts ; the first by perspiration, and the last by stool.

Secondly, we may likewise gather from thence a confirmation of that aphorism of the physicians, that the errors of the first concoction are never mended in the subsequent, unless the case to be mentioned in the next paragraph be an exception to it ; for the gross meal gave rather more uneasiness, when it came to be thrown off by perspiration.

Thirdly, from hence we may also see the ridiculousness of the vulgar opinion, ascribing universally the pain they suffer, or the relief they find, to the last meal or medicine.

There are some sorts of food which may oppress and load the stomach and alimentary ducts in the first concoction, which may be very safe and benign in the subsequent ones. For instance, cheese, eggs,

milk meats, and vegetable food, though duly prepared, and justly proportioned in quantity, may chance to lie heavy on the stomach, or beget wind in the alimentary passages of some persons (and yet drinking of water will always remedy this inconveniency); but these neither having their parts strongly united, nor abounding in sharp urinous salts, when they become sufficiently diluted with a watery menstruum, or dissolved into their component parts, and their parts being still smaller than the smallest vessels, and their union constantly less than the force of the concoctive powers, in persons who have any remaining fund of life in them, will thereby yield a sweet, thin, and easy circulating chyle, in the after concoctions become benign and salutary, and afford no materials for chronical distempers; and the wind thence generated not being pointed and armed with such sharp salts as those of flesh meats, or the corrosive juices of spirituous liquors, will be as innocent and safe as the element we breathe in.

The second evacuation is by water, whose circumstances and condition, though little adverted to, may be of great service to discover both the state of our constitution, and the proportion of our diet. Some people are frightened when they find their water turbid, broken, and full of brick dust sediment; whereas, that is the best symptom it can have; for though it supposes the blood loaded

with urinous salts and crudities, yet it is still better they should pass off than continue in the habit. On the contrary, when those that live freely have quantities of pale, limpid, and sweet water, it is a certain sign that the perspiration is stopped; that neither the first nor the secondary concoctions have been duly performed; that the chyle has not been sufficiently broken, nor the finer secretions duly made by the lesser drains; and that the urinous salts are still retained in the habit: upon which must needs ensue oppression of spirits, chills upon the extremities, flying rheumatic pains over the body, headaches, cholies and gripes. And here it may not be amiss to take notice of the difference of the pale water of hypochondriacal and hysterical persons, from that of those who labour under a true diabetes, the apprehension of which terrifies so often the low and dispirited persons of the first class. The water of both has the same appearance, both in quality and quantity; at least, in the first instance, they are both attended with the same sinking and dispiritedness. But, in a true diabetes, there is a constant thirst, a low but quick pulse, the water is much sweeter, and continues longer to come off in profuse quantities, insomuch, that sometimes it is so violent as to run down the party in a few days. In hypochondriacal and hysterical persons there is little or no thirst, never a quick pulse, but rather too low and slow a one, the flux

soon stops of itself, or by any little diaphoretic medicine, and they are cold upon the extremities, which the others are not.

That bluish and variegated film, which sometimes looks like oil and fat swimming on the water of scorbutic and cachectic persons, is nothing but the congregated salts, which are crowded so thick together that they are ready to shoot into clusters, much like the film of a lye, when standing for the chrystallization of fixed salts. The water, which has a light cloud hanging almost from the top to the bottom, is of a bright amber colour, and about three quarters of the liquor taken down is best, and a certain sign of a due concoction, a just proportion of food, and a total absence of repletion and crudity ; and those who live temperately use due exercise, and enjoy a perfect state of health, always make such water.

Those who are subject to great quantities of limpid and pale water, ought to conclude that their food has been too heavy in quality, or too much in quantity for their concoctive powers, or their labour too little, and that therefore they ought to proportion both, for the future, with more caution and exactness, by living low for some time, or using more exercise. And to stop their flux of pale water, they ought to take a little Gascoign's powder, or confection of Alkermes, at night, and drink liberally of small sack whey, with a few drops

of spirit of hartshorn, to set the perspiration in order again. Those, on the other hand, who make high-coloured, foul, and very turbid water in smaller quantities, have either inflamed their blood too much, with spirituous liquors, or loaded it with too great a quantity of animal salts. To prevent, therefore, disorders and diseases, they must lessen the quantity of their flesh meat, and temper the heat of their wine with water, else they will lay the foundation of some acute, inflammatory, or dangerous chronical distemper.

The worst kind of water of all, is that of a dark brown or dirty red, in a small quantity, and without any sediment. This kind of water, in acute diseases, always indicates insuperable crudity, high inflammation, tending towards mortification, and a dying languor in nature; and in persons labouring under no visible distemper at the time, an almost total debility of the concoctive powers, an inseparable union of the constituent parts of the blood, the highest degree of crudity, and a deadness in all the animal functions; and if preceded by long continued excesses, requires the advice of a physician. I shall say nothing of coffee-coloured, bloody, wheyish, or purulent water, or that with white gravel, films, rags, or bits of broken membranes. They are well known to be nephritic, or symptoms of an ulcer somewhere in the urinary passages.

There happens also an evacuation, both by stool and urine, to some weak persons of relaxed nerves, that extremely alarms the patient, and is not so readily accounted for in common ætiology. It is when either a white, transparent, viscid substance, like jelly, is constantly voided by the bowels, more or less; or when a white, milk, gluey substance, like cream or laudable matter, settles in the water: both these appearances are commonly ascribed to an ulcer in the guts, or in the kidneys, the very apprehension of which is almost sufficient, in some low persons, to bring on the distemper feared; and yet I am very certain there is neither ulcer nor true matter in either case, as I propose them: for where there is violent and acute pain, or matter of different colours or mixtures, there very possibly may be, nay, certainly there is, an ulcer.

But in the case I here intend, there is very little or no pain, no hectic paroxysms, which always attend an inward ulcer; no bloody or sanious mixtures, which always betray the inward sore; no fetid smell to imply corruption. For the cases I put at present happen to persons the least capable of inflammation or imposthumation, viz. to paralytic persons, or those of a natural tendency that way; to cold, vapourish persons of low spirits and weak nerves, whose pulse is low and slow, and their natural functions weak and languid; all which evidently show, that these discharges cannot come

from an ulcer. The first case I take to be either an obstruction of some of the lacteals, whereby the chyle cannot be carried off in any sufficient quantity, but passing through the guts, and its more watery part being evaporated, it becomes thick and gelatinous, and is thrown off at last with the remains of the food; else it must be an obstruction of those glands of the guts, by which a viscid matter for lubricating of them is commonly secreted; by the imprisonment and evaporation of which matter, it thickens and turns like a jelly (as it does by cold, or overfeeding, in the glands of the mouth, throat, and windpipe), and at last, by the squeezing of the guts, is thrown off. And in the same manner I take that milky substance subsiding in the water, in such a case as I have mentioned, to arise from a relaxation of the glands of the kidneys and bladder, and other urinary passages; and that both are to be cured the same way other nervous distempers are cured, viz. by a proper regimen of diet, and a course of contracting, strengthening, and volatile medicines.

The insensible perspiration is the third evacuation to be considered. The statical chair, invented by Sanctorius, for examining the quantity of the perspiration, however ingenious and delightful in speculation, is too cumbersome and laborious to be of any great use in common life. It is certain, however, that the free and full flowing of this evacuation

tion is as necessary to health as any of the grosser, since in quantity it is at least equal to both the forementioned; and an obstruction thereof is generally the source of all acute diseases, as it is a consequence of all chronical ones; and therefore I have advised those who are much abroad in easterly and northerly winds (which most of any obstruct perspiration), and have fluxes of white and water, to a ready antidote to prevent the beginnings of these obstructions.

Catching of cold is nothing but sucking in, by the passages of perspiration, large quantities of moist air and nitrous salts, which, by thickening the blood and juices (as is evident from bleeding after catching cold), and thereby obstructing, not only the perspiration, but also all the other finer secretions, raises immediately a small fever and a tumult in the whole animal economy; and, neglected, lays a foundation for consumptions, obstructions of the great viscera, and universal cachexies. The tender, therefore, and valetudinary, ought cautiously to avoid all occasions of catching cold, and if they have been so unfortunate as to get one, to set about its cure immediately, before it has taken too deep root in the habit. From the nature of the disorder thus described, the remedy is obvious, viz. lying much in bed, drinking plentifully of small warm sack whey, with a few drops of spirit of hartshorn, posset drink, water gruel, or

any other warm small liquors, a scruple of Gascoign's powder morning and night, living low upon spoon meats, pudding, and chicken, and drinking every thing warm: in a word, treating it at first as a small fever, with gentle diaphoretics; and afterward, if any cough or spitting should remain (which this method generally prevents) by softening the breast with a little sugar candy, and oil of sweet almonds, or a solution of gum ammoniac, an ounce to a quart of barley water, to make the expectoration easy; and going cautiously and well cloathed into the air afterwards. This is a much more natural, easy, and effectual method than the practice by balsams, linctuses, pectorals, and the like trumpery in common use, which serve only to spoil the stomach, oppress the spirits, and hurt the constitution.

The surest way of maintaining and promoting a due perspiration is, to take down no more food than what the concoctive powers are sufficient to reduce into a due fluidity, and the expences of living require, to prosecute necessary exercise, and use the other assistances advised in the foregoing chapters. Want of due rest, and the refreshment that follows upon it, starting, tossing, and tumbling in bed, are certain signs that the perspiration is not duly carried on in the night season: and therefore, in order to remedy this, a greater proportion of exercise, a greater degree of abstinence,

or some gentle domestic purge, must be had recourse to the next day: Cholical pains, gripes, and purging, much eructation and belching of wind, low spiritedness, yawning, and stretching, are infallible signs that the perspiration flows not freely and plentifully; and therefore the same remedies ought to be prosecuted, as soon as an opportunity offers, else the party will suffer at last. Wind, as Sanctorius observes and demonstrates, is nothing but obstructed perspiration; and yawning and stretching are but convulsions of the proper muscles and organs appointed by nature, the one for pumping up wind from the bowels, the other for pressing upon the excretory ducts in the skin, to force out the sluggish perspirable matter; and it is beautiful to observe how wisely nature has contrived the spasms, cramps, and convulsions of the proper organs, to expel every noxious and extraneous body out of the habit. Thus, coughing is a convulsion of the diaphragm and muscles of the breast, to throw out viscid phlegm; vomiting of the stomach (assisted by the diaphragm and muscles of the abdomen) to throw up its crudities, and those of the bowels; or to expel sand or stones from the kidneys. The throes of labouring women are to bring off the burden. Sneezing is an effort of the proper muscles, to eject some noxious particles from the organs of smelling. Shivering and stretching to assist perspiration; and yawning

to pump up noxious wind: and even laughing itself, is an effort of the muscles of the whole trunk, to throw off something that its delicate membranes cannot bear. And lastly, hysterical fits and convulsions, both in infants and persons come to maturity, are but violent efforts, struggles, workings, cramps, and spasms of all the muscles of the whole body together, to expel, squeeze, and press out the sharp acrimonious wind, fumes, and vapours from the cavities of the whole machine.

There is an evacuation incident to persons of weak nerves, which could not conveniently come in under the general division, because it happens too seldom to make a new member of it. It is a discharge of thin rheum from the glands of the mouth, throat, and stomach, and is called by some a nervous or scorbutic spitting. It rises sometimes to the height of a *petit Flux de Bouche*, as the French call it, and threatens some tender persons, as they apprehend, with a consumption, though it imply nothing less. We may observe some, who are struck with a deep palsy, to flow at the mouth, and drivel down their breasts; insomuch, that the afflicted of this sort, who are advanced in years, can scarce speak intelligibly for the flux, till they have first emptied and cleansed their mouths; and this arises to so great a height, in some much broken paralytic persons, that upon the slightest occasions, either of joy or grief, they are apt to run

into a profusion of tears, sighs, and sobbings. And some sorts of ideots, and those hysterically moped, and most of those who suffer from relaxed and weak nerves, are more or less subject to these salivary discharges, especially after excesses in diet. Hence the first sort receive the appellation of snivellers or drivellers; and the difficulty of the cure of all the diseases of weak nerves depends much on the quantity and constitution of this flux. For much and long spitting and running off of this rheum, implies a total relaxation of the whole nervous system, and shews neither the first nor second concoctions have been duly performed.

I have frequently had occasion to shew how excesses in the quantity or quality of the food, in persons of relaxed and weak nerves, begot a viscid and gross chyle, of which that part, which could not get through the lacteals, lay fermenting and putrifying in the alimentary passages, begot wind, gripes, and cholics, and at last wrought itself off like a purge; and that that part which got through the lacteals, and was received within the limits of the circulation, being too gross and gluey to be mixed with the old mass of the fluids, to circulate through the smallest vessels, and to enter the fine perspiratory glands, would necessarily be thrown into the wider, more spongy and loose salivary glands, which are appointed by nature to discern the more glutinous parts of the fluids; and from

thence this salivary inundation proceeds. The fact is, when those of weak nerves commit habitual excesses in their diet, the glands and small vessels of all the body are tumified, swelled, and obstructed thereby, as they needs must be : and it is from the pressure of these enlarged glands, and the obstructed capillary vessels on the nerves, and patent blood-vessels, that most of the evils they suffer under proceed. But more especially are the glands appointed to draw off the more viscid serous part of the blood, obstructed and tumified thereby. Upon which account, as Baglivi advises, to enquire well into the state of the tongue and mouth, in order to discover the condition of the stomach, guts, and bowels ; so, I think, it is highly reasonable in a chronical case, to have great regard to the condition of the eyes ; and if a dead, cold languor be observed in the hue or water of them (as jewellers speak of diamonds), and more especially if the lachrymal gland in the corner next the nose, which I always narrowly inspect ; if, I say, this gland be found harder, or larger than ordinary, swelled and tumified, it must certainly be concluded, whatever else be in the case, there must be a relaxed state of nerves, much vapours, weak natural functions, and a mismanaged regimen. And it is from the obstruction and swelling of this and the other glands, in and about the eyes, and their pressure upon the optical nerves, and fine blood-

vessels, that those spots, flies, atoms, dimness, darkness, and confusion of sight, in vapourish and hysterical people proceed. For this gland shews, that the whole serous glands in the upper regions of the body are, in proportion, tumified and swelled with viscid humours through excess of diet; unless the person have suffered there by accident, or labours under some natural disorders of the eyes.

From the obstruction and swelling of the salivary glands in the mouth, throat, and gullet, proceed also those choakings, gulping, and strangling, that hysteric persons so often complain of. The wind and crudities lodged in their stomach and guts, and the rest of the cavities of the body pressing to get vent upwards, are resisted and stopped in their passage by the diaphragm, whereby the inspiration is straitened, and by the bulk of these glands throughout the gullet the way is entirely stopped, which raises such a tumult and struggle, as produces the mentioned symptoms, which I have not leisure to detail here more minutely. Now this salivation or discharge of the thinner rheum, and that coughing and hacking of more viscid phlegm, commonly called a nervous cough, as also the chincough of children, and all such discharges of sharp serum in persons of weak and relaxed nerves, is an effort of nature to relieve them; and if discreetly managed, and duly heeded, would

prove a crisis to their disorders, and quite free them from their present paroxysms, and set the circulation and perspiration, and consequently the spirits, at freedom and liberty again. Some persons most distractedly run to drams and cordials to remedy this evil, to stop the violence of this deluge, and to raise their drooping spirits ; but it serves only to thicken the phlegm, shut up the mouths of the salivary glands eloser, and so to perpetuate the evil they mean to cure. Others devour large quantities of high and generous foods, because they find a little relief to their spirits, from the first run of the sweet, thin, and spirituous chyle : but this is only adding fuel to the fire, and running on in a perpetual round of lowness and slaving. Whereas, would they suffer nature to act her own way, to carry on this critical discharge as far as it will go, without offering in the least either to check or promote it ; but by thin, light food, and cool liquors, in moderate, or rather under-dosed quantities, support her in the manner the concoctive powers are sufficient for ; after she had discharged all the crudities from the mass of the fluids by these emunctory glands, and thereby given a free passage to the wind to escape the way it tends, the salivation would lessen gradually, and at last stop of itself. And if then, towards the decline, a gentle vomit, to pump up the slow and viscid remains of the wind and phlegm in the up-

per part of the alimentary passages, and afterwards a gentle stomachic warm purge, to scour the lower part of these tubes, were carefully administered, the patient would soon find a clear head, lightsome spirits, ease and freedom from pain and oppression; the circulation and perspiration would be soon brought to their natural and sound state, and health and cheerfulness restored together; unless a mortal or habitual spitting was the case, which I have sometimes observed as fatal and incurable as a true dropsy, or inveterate diabetes; all which owe their being to a deep scurvy, whereby the globular part of the blood is entirely broken, and the serum made a mere lixivium or lye.

RULES RELATING TO EVACUATIONS, AND FOR PREVENTING THEIR OBSTRUCTION.

Costive stools are signs of over-heated blood, too spare feeding, slowness of digestion, or weakness of the guts.

Purging stools shew intemperate feeding. Too full a meal has the effects of a purge, fills the guts with wind, and gives gripes. Mercury, and even the bark, diascordium and treacle, if over-dosed, purge.

Headaches, sick stomachs, vapours, low spirits, gripes, and cholics, proceed from cramming; and are ever accompanied with loose stools.

Those that live temperately, have one regular stool a day. Those who have more, exceed.

The cure of all relaxations of the nerves (the source of chronical diseases) must necessarily begin at the stomach and guts.

The time from eating a meal, till its discharge, is three days, in those that have one stool a day : six in those that have but one in two days.

A gross meal produces more disorders the day the excrements of it go off, than the day it is eaten.

A meal takes the same time to get through the habit by perspiration, than its remains do to pass through the guts.

The errors of the first concoctions cannot be mended afterwards.

Pain or relief is not always the effect of the last meal or medicine that was taken down.

Though cheese, eggs, milk, and vegetable foods may be hard to digest, without drinking of water, to some stomachs, yet their chyle is good, and produces no bad effects.

Turbid water, with brick-dust sediment, proceeds from the critical discharge of what was preternaturally retained in the habit.

Pale sweet water, from the urinous salts being yet retained.

There is a great difference between hysteric pale water, and that which proceeds from a diabetes.

That appearance of fat on the urine of some people, is nothing but a thin film of salts.

Bright amber-coloured water, with a light sediment rising toward the top, amounting to three quarters of what is drank, is a sign of good digestion.

Great quantities of pale water proceed from excess in the quantity of food, and want of exercise. The cure of it is performed by eating less, using more exercise, and taking some diaphoretics to set the perspiration right.

High-coloured turbid water, in small quantity, shews abundance of animal salts in the habit, or the immoderate use of spirituous liquors; and must be cured by vegetable food, and water, or other small drink.

Dark brown water, or of a dirty red, is extremely dangerous, both in acute cases, and in those that seem at present to ail nothing.

Bloody purulent water, and full of films, is a sign of nephritic ailments, stone, and gravel.

The viseid matter like jelly in the stools, and the viseid milky substance somewhat like matter in the urine of some people of weak nerves, proceed from a corruption of the liquor of the mucous glands of the intestines, and of the bladder, and other urinary passages.

Obstruction of perspiration is one source of acute diseases, and a consequence of chronical ones.

Catching of cold is an obstruction of perspiration, by the humid and nitrous particles of the air.

It should be cured by gentle diaphoretics and not by balsamic pectorals, which do no good, but in the end of the cure, to promote expectoration from the lungs, if there be any occasion for it.

Persons of weak nerves have often a critical flux of rheum from the glands of the mouth and throat, to a very large quantity, which, if not tampered with, brings them great relief.

CHAPTER VI.

OF THE PASSIONS.

I COME now, in the order of my first proposed method, to treat of the Passions; which have a greater influence on health and long life, than most people are aware of. And that I may propose my scheme with the greatest clearness I can, I will lay down some propositions, or axioms, as the ground-work on which it is founded,

The soul resides eminently in the brain, where all the nervous fibres terminate inwardly, like a musician by a well-tuned instrument, which has keys within on which it may play, and without, on which other persons and bodies may also play. By the inward keys, I understand those means by

which the thoughts of the mind affect the body ; and by the outward, those whereby the actions or sensations of the body affect the mind. Both these affections may be called passions in a general view, as either part of the compound is acted upon.

As a man is compounded of two different principles, soul and body ; and as there are two different kinds of outward objects, by which these two different principles may be acted upon, viz., matter and spirit ; the passions in these two different views may be divided into spiritual and animal.

As to the first branch of this division, since spirits (if I may be allowed there are any such beings) may be supposed to act upon one another, without the mediation of organical bodies (such perhaps was St. Paul's extasy, when he was wrapt up into the third heavens ; such was Moscs' commerce with his Maker, when he spoke to God face to face ; such must the influence of the Divine grace be supposed ; and all who allow of revelation, admit that the soul may be serene and tranquil, while the body is in distress and pain ; and even all the stoic philosophy is grounded on this distinction), it must have a real existence in nature. And the other branch must also be allowed by all those who cannot think brute animals mere machines, and who observe that we have impressions made on our bodily organs, which affect us, sometimes very deeply, even in our sleep. However these

things be, it is sufficient for my purpose, that man is allowed to be a compound being, on which outward objects may act, to abstract the consideration of the impressions made on the spirit from those made on the body.

The union of these two principles in the compound, Man, seems to consist in laws pre-established by the Author of Nature, in the communications between bodics and spirits, as there are, no doubt, laws established for spirits, in their commerce and actions upon one another: for every one knows there are laws of nature, established by its author, for the actions of bodies upon one another.

These laws of the actions of the soul on the body, and of the body upon the soul, are never to be known to us but by their effects; as the laws of nature in the actions of bodies upon one another were first discovered by experiment, and afterward reduced into general propositions. One law of the action of the soul on the body, and *vice versa*, seems to be, that upon such and such motions produced in the musical instrument of the body, such and such sensations should arise in the mind; and on such and such actions of the soul, such and such motions in the body should ensue; much like a signal agreed to between two generals, the one within, the other without a citadel, which should signify to one another what they have before agreed

to, and established between them ; or like the key of a cypher, which readily explains the otherwise unintelligible writing. Besides these passions and affections, which are involuntary—

As bodies are purely passive, and are acted upon by other bodies, conformable to the settled laws of nature; in spiritual beings, on the contrary, there is an active, self-motive, self-determining principle, by which it directs and manages itself with regard not only to its own self, and its own sentiments, but also to its actions and influence on other beings without it, and their actions and influences on it. And this is the foundation of liberty, or free will, in rational and intelligent beings.

That this faculty or principle really exists, and is essential to spiritual beings, is as certain as that there is motion in the universe, or that body and spirit are essentially different : for that motion is not essential to bodies, is as certain as that bodies are impenetrable ; and that the quantity of motion in the universe may be, and is daily increased, is as much demonstration as any proposition in Euclid. And if motion be, is, or may be increased, it must arise from spiritual beings ; and he who can deny this, only shows himself ignorant of the principles of all true and just philosophy, and of the first elements of the system of material and spiritual beings. For further conviction of this, and clearing up all possible objections and difficulties, I

refer the reader to the learned and ingenious Dr. Clarke, in his Answer to the Enquiry into Liberty, and his Letters to Mr. Leibnitz, where he has treated this matter with the greatest perspicuity and justness. Besides these now mentioned principles—

As in bodies there is a principle of gravity or attraction, whereby, *in vacuo*, they tend to one another, and would unite, according to certain laws and limitations established by the Author of Nature; so there is an analogous principle in spirits, whereby they would as certainly, in their proper vacuity, be attracted by, tend to, and unite with one another, and their first author, centre, and the rock out of which they were hewn (to use a scripture phrase), as the planets would to one another, and to the sun. And this is nothing else but what in scripture is called charity.

This proposition is as certain as the rules of analogy are, which, in my opinion, are the foundation of all the knowledge we can have of nature, while we can see only a few links of the universal chain, and but a few disjointed parts of the grand system of the universe. The Author of Nature, who could create intelligent beings only in order to make them happy, could not leave them to so many different attractions, without implanting into their essence and substance, as an antidote to such variety of distractions, an infinite tendency, bent, and

bias towards beings of the same nature, and towards himself, who was the cause and object of their felicity ; and even in this our lapsed and forlorn estate, there remain evident footsteps of this principle yet uneffaced. Such are the cheeks of conscience, natural affection, and the universal desire of immortality, and dread of annihilation ; what the world calls the seeds of honour and renown ; all that concern and regard paid mere romantic heroes ; and the worship bestowed by all nations, who are not sunk into mere brutality, on some superior and invisible powers. These are remains of this principle and its workings, sufficient to show its reality *à posteriori* ; as the laws of analogy, and the nature and attributes of the first Being, shew it *à priori*. Those who admit of revelation, cannot doubt of it for a moment ; for Moses calls it a law engraven on the heart of man ; and St. Paul, the greatest perfection of human nature. Hence the true nature of supreme spiritual good and evil may be discovered. For if there be impressed on spiritual being an infinite tendency, bent, and bias, to be reunited with their divine original, and the place in the divine substance out of which they were formed (if I may speak so in a figurative sense), then their being finally united with this their divine original is the supreme spiritual good, and the several approaches toward this union are inferior spiritual goods ; as the being finally separated from

it is the supreme spiritual evil, and the several steps toward this separation, inferior spiritual evils. And the means of this union and separation are moral good and evil.

The most general division of the passions was into spiritual and animal. As, in the first sense, passion may be defined—the sentiments produced on the soul by external objects, either spiritual ones immediately, or material ones, by the mediation of the organs of the body; so, in the second sense, passion may be defined—the effect produced by spirits, or bodies, immediately on the body: and since outward objects may be considered as goods or evils, the most natural division of the passions (whether spiritual or animal) as they regard these objects, is into the pleasurable and the painful; which exhausts their whole extent. And in this sense all the passions may be reduced to love and hatred, of which joy and sorrow, hope and fear, &c. are but different modifications or complexions, as they may be called. I do not descend to a more particular account, not intending an accurate treatise on the passions, but only to lay a foundation for some general observations on them, as they regard and influence health and long life.

In relation to the organical instruments of the body, and the effects wrought on them, or the disorders brought upon them, the passions may be divided into acute and chronical, after the same

manner, and for the same reason as diseases are. The acute passions, whether pleasurable or painful, have much the same effect, and work much after the same manner as acute diseases do. They effect a brisk and lively circulation of the fluids, crisp up and constrict the solids for some short time. Thus sudden gusts of joy or grief, pleasure or pain, stimulate and spur the nervous fibres, and the coats of the animal tubes, and thereby give a celerity and brisker motion to their included fluids for the same time: and the functions of the heart and lungs being involuntary, they have their more immediate effects upon them. Thus, both sudden joy and grief make us breathe short and quick, and make our pulse small and frequent. The retaining our breath for some time (for so far our breathing is voluntary) to reflect more intensely upon the painful object, forces at last a strong expiration, which becomes a sigh. Thus a sudden painful idea makes a quicker circulation of the blood, and thereby throwing a greater quantity thereof upwards, through the proportionally larger branch of the aorta, makes it appear in the superficial vessels of the face, neck, and breast, and so produces a blush; which, when longer continued, and being very strong, is dispersed over the whole surface of the body. Hence the observation of blushing at the back of one's hand; and the reasons why we sigh upon some occasions, and blush upon others, de-

pend upon the different structure of the organs of pulsation and respiration. A quick surprising pain of mind acts upon the heart, because the motion of the heart is altogether involuntary ; so that a sudden constriction takes place there immediately to increase the pulse. Whereas we have some power over the breathing ; we can stop or suspend it for a time ; and when we are thinking intensely, our attention partly makes us hold our breath, and hence ensues sighing rather than blushing ; for the pain being slow, quickens the pulse more gradually : but if it continues long, both actions of both organs are respectively produced ; and hence it comes to pass, that upon anxiety, concern, and earnest expectation, the pulse is found quick and small, and the breath thick and difficult, as experience shews. The same principles will account for the effects of fear and anger, which make us change colour, and look red or pale, as the blood is accelerated or retarded in its course. The sudden gusts of these passions being thus accounted for, when they become extreme, they drive about the blood with such a hurricane, that nature is overset, like a mill by a flood ; so that what drove it only quicker round before, now entirely stops it, and renders the countenance pale and ghastly. Sudden and great fear or grief do so convulse the nervous system, that sometimes they alter the position of the parts, and fix them in a new one. Thus the

hair stands on end in a fright, and the whole system of the nerves becomes so rigid and stiff, as to lose their elasticity; whereby the animal functions are stopped at once; and fainting, and sometimes death ensues.

The chronical passions, like chronical diseases, wear out, waste, and destroy the nervous system gradually. Those nerves which are necessary for considering, brooding over, and fixing such a set of ideas on the imagination, being constantly employed, are worn out, broken and impaired. The rest, by disuse, become rusty and inactive, lifeless and destitute of a sufficient flux of warm blood and due nourishment. And thus the whole system languishes and runs into decay. Thus slow and long grief, dark melancholy, hopeless natural love, and overweening pride, (which is an outrageous degree of self-love) impair the habit, by making the proper seasons of necessary food and due labour be neglected, and thereby depriving the natural functions of their wonted supplies, overworking some part of the nervous system, and leaving the other to rust, and become resty for want of use. Some of these passions, as love, grief, and pride, when very intense and long indulged, terminate even in madness. The reason is, as I have been saying, because long and constant habits of fixing one thing on the imagination, begets a ready disposition in the nerves to produce again the same

image, till the thought of it becomes spontaneous and natural, like breathing, or the motion of the heart, which the machine performs without the consent of the will : and also a disability or immobility ensues on the other parts, just as the faquiers in India fix one or both hands by long holding them up, so as that they cannot bring them down again. There is a kind of melancholy which is called religious, because it is conversant about matters of religion ; although often, the persons so distempered have little solid piety. And this is merely a bodily disease, produced by an ill habit of constitution, wherein the nervous system is broken and disordered, and the juices are become viscid and gluey. This melancholy arises generally from a disgust or disrelish of worldly amusements and creature comforts, whereupon the mind turns to religion for consolation and peace. But as the person is in a very imperfect and unmortified state, not duly instructed and disciplined, and ignorant how to govern himself, there ensues fluctuation and indocility, scrupulosity, horror and despair.

Since the mind resides, as has been said, in the common sensory, like a skilful musician by a well-tuned instrument ; if the organ be sound, duly tempered, and exactly adjusted, answering and corresponding with the actions of the musician, the music will be distinct, agreeable and harmonious. But if the organ be spoiled or broken, neither duly

tuned nor justly fitted up, it will not answer the intention of the musician, nor yield any distinct sound or true harmony. Those, therefore, who are tender and valetudinary, lead sedentary lives, or indulge contemplative studies, ought to avoid excesses of the passions as they would excesses in high food, or spirituous liquors, if they have any regard to health, to the preservation or integrity of their intellectual faculties, or the bodily organs of them. As the passions, when slow and continued, relax, unbend, and dissolve the nervous fibres; so the sudden and violent ones screw up, stretch, and bend them, whereby the blood and juices are hurried about with a violent impetuosity, and all the secretions are either stopped by the constrictions, cramps, and convulsions begot by them, or are precipitated, crude, and unconcocted, and so begot, or at least dispose toward inflammations, fevers, or mortifications. Hatred, for example, anger and malice, are but degrees of a frenzy, and a frenzy is one kind of a raging fever. From all which it is plain, the violent and sudden passions are more dangerous to health than the slow and continued, as acute diseases are more destructive than chronical.

To shew, yet farther, the influence of the passions on the animal economy, let us consider the different constitutions of men. Those who have very springy, lively, and elastic fibres, have the quickest sensa-

tion, a weaker impulse producing a stronger sensation in them. These generally excel in the animal faculty of imagination. Hence the poet,

Genus irritabile vatum.

And therefore your men of imagination are generally given to sensual pleasure, because the objects of sense yield them a more delicate touch, and a livelier sensation than they do others. But if they happen to live so long, (which is hardly possible) in the decline of life they pay dearly for the greater bodily pleasures they enjoyed in the youthful days of their vanity. Those of rigid, stiff, and unyielding fibres, have less vivid sensations, because it requires a greater degree of force to overcome a greater resistance. Those excel most in the labours of the understanding, or the intellectual faculties, retain their impressions longest, and pursue them farthest; and are most susceptible of the slow and lasting passions, which secretly consume them as chronical diseases do. And, lastly, those whose organs of sensation are (if I may speak so) unelastic, or entirely callous, resty for want of exercise, or any way obstructed, or naturally ill-formed, as they have scarce any passions at all, or any lively sensations, and are incapable of lasting impressions; so they enjoy the firmest health, and are subject to the fewest diseases: such are idiots, peasants, and mechanics, and all those we call indolent people.

We have before shewn, that weak limbs, and all the bodily organs, may be strengthened and repaired by proper exercise; and there is no doubt to be made, but the organs of sensation, and those the mind uses in its intellectual operations, may be likewise improved, strengthened, and perfected by constant use and proper application. And if by excesses, and original bad conformation, or any accident these organs come to be spoiled, or by the bad state of the juices they be weakened in their functions, then the medicinal and chirurgical arts may take place, and come in play; but if the passions be raging and tumultuous, and constantly fuelled, nothing less than He, who has the hearts of men in his hands, and forms them as a potter does his clay, who stills the raging of the seas, and calms the tempests of the air, can settle and quiet such tumultuous overbearing hurricanes in the mind and animal economy. Without such a miracle, since the soul and body act mutually upon one another, and the tabernacle of clay is the weakest part of the compound, it must at last be overborne and thrown down.

In such a wretched case, I know no remedy but to drown all other passions in that spiritual one of the love of God. The reasonableness and justness of which proceeding, and (what may seem a paradox) the usefulness of it to health, and its benign influence on the animal economy, I shall endeavour to demonstrate. Spiritual love is that principle

analogous to attraction ; it is the tendency, bias, or impulse of the minds of men and other spirits, toward the most amiable objects, communicated by their Creator in their original formation, by virtue of which they constantly tend, press, and urge to unite (and if obstacles were removed, would unite) with one another, and be all united with their origin. This principle, indeed, in this lapsed estate of man (where it is overlaid and buried under rubbish, involved in so many other attractions, and stifled with such letts and contrarieties, that its action is felt but just enough to know that it is, and wants to be awaked with labour, and excited with violence, as the scripture mentions, the taking the kingdom of heaven by force), on its first development and expansion, and in its first exercises, may be called a spiritual passion, as it is the first motions, endeavours, and velleities toward the love of God or charity. But in its advances, and final perfection and consummation, it discovers itself to be a faculty, quality, or inherent power in the soul, whereby it will act without solicitation, motive, or direction. As a stone in a wall fastened with mortar, compressed by surrounding stones, and involved in a million of other attractions, cannot fall to the earth, nor sensibly exert its natural gravity, no, not so much as to discover there is such a principle in it ; just so the intelligent soul, in this her lapsed estate, being drowned in sense,

chained and fettered by ignorance and perverseness, drawn and hurried away by the devil, the world and the flesh, is disabled from exerting this inherent and innate principle of re-union, and wants sufficient light on the understanding, and a right turn of the will, to be put in a capacity of exercising it. But in its proper vacuity, and being freed from these letts and impediments, it would mount towards its original, like an eagle toward the sun. Amiability, pulchritude, or beauty, is as much the peculiar and proper object of this affection of the mind, as light or a luminous body is of vision; for deformity, as such, can never be loved; and beauty or perfection is, in reality and just philosophy, nothing but analogy, order, or just proportion. From hence it necessarily follows, that, in the scale of beings, all objects ought to be loved in proportion to their degree of beauty, symmetry, or perfection; and consequently, the highest perfection ought to be loved with the highest degree of love, and the several subordinate degrees of perfection, with proportionate degrees of this affection of the mind. And since finite, when compared with infinite, vanishes quite, or becomes nothing, it follows necessarily (since there is, and can be but one object, that is infinite, good, and perfect, and all others are but created and finite goods; that is, in comparison they are nothing) that, according to the eternal and immutable laws

of analogy, the one supreme good, endued with infinite perfection, ought to be loved with a love infinitely superior to our affections for other things, or (which is the same thing in other words) that, in comparison, our love to the Author of our being ought to be infinite; and that to ourselves and other objects, as being finite creatures, none at all. This is the true philosophy of this matter, and as much a demonstration as any thing in numbers or geometry possibly can be, however it may be received by men of self-love and carnal minds.

Yet I would not be so understood, as if I condemned all subordinate and duly proportioned regards for ourselves and other objects about us, that are necessary for our support and accommodation in our present state. No! there is a just and laudable self-love, as well as a false and vicious one. If we love ourselves as we love our neighbours; if we love ourselves as God loves us; if we love ourselves as we deserve to be loved by the infinitely perfect Being; if we love ourselves with a justly proportioned and duly subordinate love; that is, if we love ourselves with a finite, and him with an infinite love, or a love increasing and going on *in infinitum*, that has neither limits nor end; then we love ourselves as we ought: this self-love is just and laudable, and has its due and proper degree of reality and existence in the nature of things. Perfection, or an object perfect in its kind,

or one that we think so, is the proper object of our love. And as in due analogy, proportion, and order, infinite perfection requires infinite love, or the highest degree of love we can give it; so all other objects are to be loved with a degree of love proportioned to their perfection. And since a Being of infinite perfection can be but one, and all other beings can have but a finite degree of perfection, we must love them but with a finite love; or, the proportion of our love to him and them ought to be as infinite is to finite: that is, comparatively, we ought to love them with no love at all; but absolutely (or without comparing created things to the infinitely perfect Being) with their proper degree of finite love, according to their rank in the scale of beings.

Though from the nature of the demonstration I have given, that God is to be loved, it is evident he is to be loved infinitely for himself, and his own infinite perfections, abstracting from all other considerations, even that of our own happiness, in the enjoyment of, or union with him; yet it is certain these two, our love to God, and our own happiness, cannot be actually separated. Pleasure consists in this, that the soul and body are affected by the objects that produce it, with an harmonious and commensurate action or touch; for in their original and uncorrupted make, as they came from the hands of their Creator, both separately, and

each by themselves, and also in their actions on one another, all was harmony and concord. As to the body; as nothing but a musical or commensurate touch can affect it with pleasure, and as a discordant and uncommensurate stroke creates a jarring, grating, and obstruction, which is pain (this is evident in hearing, where the agreeable sensations of sonorous bodies are altogether harmonious: Sir Isaac Newton has made it plain in vision; and, no doubt, it is so in all the other senses), so likewise as to the soul; truth, and beauty or perfection, are the only objects that give pleasure to the understanding and will, its two cardinal faculties; and these are nothing but harmony, or just proportion in the respective objects. And we have shewn, that the union of the soul and body (or life, the so much coveted good) consists in a kind of *harmonia præstabilita* (though a kind very different from Mr. Leibnitz's), whereby an harmonious touch or action upon either of them produces a pleasurable sensation. Now, as beauty or perfection gives pleasure to both the parts of the compound, and as nothing but the highest degree of perfection or beauty can give the greatest pleasure, *i. e.* happiness; it necessarily follows, that spiritual love, or the love of God, as it is the only means of uniting us with the one Being, who is infinitely perfect, is also the only means of making us infinitely happy.

As to the second thing proposed, concerning spiritual love, however foreign these metaphysical speculations concerning it may seem, to a discourse about health and long life; yet, if steadily believed, and their natural consequences reduced to practice, they would not only become the most effectual means to prevent diseases, but also, the most of any thing, promote health and long life. For, first, were our love proportioned to the order and analogy of things; were our love to the supreme Good infinite, and that to others, in comparison, none at all; we should have but one single view in all our thoughts, words, and actions, viz. the promoting and raising that supreme love to its due degree and elevation, whereby all anxiety, carking care, and solicitude about other things (the source of all our miseries, and of many bodily diseases) would be cut off all at once. Secondly, since love always begets resemblance of manners; since the object of this love is infinitely perfect; if we loved him in the supreme degree, we should infinitely endeavour to resemble him: whereby hatred and malice, luxury and lewdness, laziness, and all the other seeds of bodily diseases, would be altogether destroyed. Thirdly, since spiritual love is not only the noblest, but also the most joyful and pleasant affection of the mind; since the object of our supreme love (as an inspired poet expresses it) has fulness of joy in his presence, and rivers of

pleasures at his right hand for ever; and since our joy and happiness will always rise in proportion to our love; the placing our supreme love on the supreme Good, would render us infinitely joyful, serene, calm, and pleased; than which, certainly, no man can imagine a more effectual mean of health and long life.

RULES TO BE OBSERVED WITH REGARD TO THE
MANAGEMENT OF THE PASSIONS.

The passions have a greater influence on health than most people are aware of.

All violent and sudden passions dispose to, or actually throw people into acute diseases; and sometimes the most violent of them bring on sudden death.

The slow and lasting passions bring on chronical diseases; as we see in grief, and languishing hopeless love. Therefore the sudden and acute passions are more dangerous than the slow or chronical.

Men of lively imaginations, and great vivacity, are more liable to the sudden and violent passions and their effects. Thoughtful people, and those of good understanding, suffer most by the slow and secretly consuming passions. The indolent and the thoughtless suffer least from the passions; the stupid and idiots not at all.

The diseases brought on by the passions may be cured by medicine, as well as those proceeding from other causes, when once the passions themselves cease, or are quieted. But the preventing or calming the passions themselves is the business, not of physic, but of virtue and religion.

The love of God, as it is the sovereign remedy of all miseries, so, in particular, it effectually prevents all the bodily disorders the passions introduce, by keeping the passions themselves within due bounds; and by the unspeakable joy, and perfect calm serenity and tranquillity it gives the mind, becomes the most powerful of all the means of Health and Long Life.

CHAPTER VII.

CONTAINING THOSE OBSERVATIONS THAT CAME NOT
NATURALLY UNDER THE FOREGOING HEADS.

MENTION having been so often made of chronic, and sometimes of acute distempers, it may be convenient here to suggest to the Readers as clear an account of their nature and difference as I possibly can. Acute distempers, then, are understood such as within some short limited time have their

periods, either of a perfect crisis, and subsequent recovery, or of putting an end to the distemper and life both together, and are therefore called quick, sharp, or acute distempers, whose symptoms are more violent, their duration shorter, and their periods more quick, either of sudden death, or a glorious victory over the disease. These are generally limited within forty days; and those that run out longer turn into chronical distempers, whose periods are more slow, their symptoms less severe, and their duration longer. They too (if new fuel were not administered to them) would, by the course of nature, and the animal economy, have their periods, and terminate at the last. The viscidities of the juices, and the flaccidity of the fibres, would, in a great measure, and to some very tolerable degree, by proper remedies, and a due regimen, be removed, and the party recover in these as well as acute cases. But this requiring long time, much care, and great caution, unwearied patience and perseverance, and so long a course of self-denial as few people are willing to undergo, it is become the reproach of physic and physicians, that acute cases cure themselves (or rather nature cures them), and chronical cases are never cured. But both the branches of the reflexion are equally false. In the first, art and care, judiciously applied, will always alleviate the symptoms and suffering, will help on nature to the relief she points out, and

quicken the crisis, which it will constantly bring about, if the distemper is not too strong for the constitution; and even then it will mitigate the pain, and lay the patient gently and easily down. But in the last case, if due care be had, to follow in time the advice of an honest and experienced physician, a period certainly may be brought about to most chronical distempers, where the great viscera are not spoiled and destroyed. The failing is in the patient himself, who will not, or cannot, deny himself, for a time, sufficient to bring about the cure.

Some chronic distempers indeed are such, either by having gone too far, or by being hereditary, and interwoven with the principles of life, as never to be totally overcome: and then it is a piece of great wisdom to know how far their constitution will go, and sit down contented with that measure of health their original frame will admit of. But of this I am morally certain, if the rules and cautions laid down in this treatise be carefully, steadily, and constantly observed, few chronical distempers but will receive such relief and alleviation by them, as to make life tolerably easy, and free from grievous sufferings: and, in the mentioned case, that is all that is left for art to do. But in other chronical distempers taken in due time, where the viscera are not quite spoiled, they would infallibly bring about a final period, and perfect cure. The

most certain distinguishing mark of an acute distemper, is to have a quick pulse ; that of a chronical, to have a slow one. The first will exhaust the fluids, and wear out the solids in a short time ; whereas the last will require a longer time to produce the same effect. Some chronical distempers, especially towards the last and fatal period, turn acute ; and some acute ones terminate in chronical distempers : but this mark will not only keep them distinct, but also point out when acute distempers have chronical remissions or intermissions, and when chronical distempers have acute fits or paroxysms.

Some persons, who are extremely healthy and sound during their younger days, about, or soon after the meridian of life (that is, about thirty-five or thirty-six, according to the observation of an inspired king), fall into chronical distempers, which cut them off in a few years, or make them miserable all the rest of their lives. Thus consumptions prove mortal to some about that time. Thus stone and gravel, gout and rheumatism, scurvy and dropsy, king's-evil and skin diseases, either make their first appearances, or shew themselves in their true type about this time of life. The reason is, while the juices are sweet, sufficiently thin and fluid, but especially while the solid organs, the membranes and fibres, are yet but unfolding, stretching, and drawing out to their full dimen-

sions; any acrimony, sharpness, or corroding humour, can affect them no other way than by making them vibrate, and so extend themselves farther and farther. For as pain, so these sharp salts, by their twitching and irritation on the tender fibres, make them only contract, and so draw at both extremities, and thereby unfold and extend themselves farther. So, while the original foldings and complications of the solids are not quite extended, this irritation serves only to draw them out, and does not hurt them, till they are arrived at their full extent, which generally happens about five-and-twenty. It takes a due time after that for these sharp humours to exalt themselves to their utmost acrimony, to corrupt and putrify the juices, and also some more time to wear out, to obstruct, and break the great organs, and their smaller capillary vessels. The sum of all which brings the periods of the great attacks of these distempers to the mentioned time of life. Those in whom the original taint is deeper and more radicated, and the natural constitution weaker, suffer under these attacks sooner; and those in whom it is slighter and more superficial, and whose complexion is stronger and more hardy, hold out longer; but the generality suffer first, eminently, about the meridian of life. Hence the common observation of those that die of a genuine consumption, that they begin to feel it first before thirty-six.

There is no chronical distemper whatsoever more universal, more obstinate, and more fatal in Britain than the scurvy, taken in its general extent. Scarce any one chronical distemper but owes its origin to a scorbutic cachexie, or is so complicated with it, that it furnishes its most cruel and most obstinate symptoms. To it we owe all the dropsies that happen after the meridian of life, all diabetes, asthmas, consumptions of several kinds, many sorts of cholics and diarrhœas, some kinds of gout and rheumatisms, all palsies, various kinds of ulcers, and possibly the cancer itself, and most cutaneous foulnesses, weakly constitutions, and bad digestions, vapours, melancholy, and almost all nervous distempers whatsoever. And what a plentiful source of miseries these last are, the afflicted best can tell. And scarce any one chronical distemper whatsoever, but has some degree of this evil faithfully attending it. The reason why the scurvy is so endemic a distemper, and so fruitful of miseries, is, that it is produced by causes mostly special and particular to this island, viz. the indulging so much in animal food, and strong fermenting liquors, in contemplative studies, and sedentary professions and employments (and thence the want of due labour and exercise), together with the nitrous moisture of an island, and the inconstancy and inclemency of the seasons thence arising. I have had many occasions to show how such causes

must necessarily and naturally produce such effects. I will here only touch the matter slightly, to point out the connexion. Animal foods and strong liquors to excess, and with continuance, must load and charge the fluids with their salts. Want of due exercise must suffer these to unite in clusters, and increase their bulk in the small vessels. Their larger bulk, and greater acrimony, thence arising, must increase the viscosity of the fluids, by breaking the blood globules, and so coagulating the mass, and at last obstruct the finer pipes and all the smaller glands, whereby the tone of all the elastic fibres must be interrupted and broken, and their vibrations stopt at every obstructed gland and capillary vessel, and an universal disorder produced in the whole animal economy.

This disorder will operate and show itself in symptoms special and particular, according to the special and particular make and conformation of the parts, the weakness or the strength of the organs, the particular mismanagements, and precise state of the air the party lives in ; and the detail of these general causes applied to particular persons, must produce the respective diseases mentioned. In a word, the scurvy is a kind of catholic distemper here in Britain, arising from constant and general causes, from the customs of the people, and from the nature of the climate, which renders the serous part of the blood too thick and

gluey, breaks and divides the union of the globulous parts, obstructs the small vessels, and destroys the springiness and elasticity of the fibres; so that most chronical distempers can be little else but branches and scions from this root, which (like Pandora's box) is so fruitful of variety of mischiefs. And its arising from the climate and customs of the people, is the reason why chronical distempers are so frequent in Britain to what they are in warmer climates (which, by a freer perspiration and lighter diet, not only prevent those diseases in their own inhabitants, but universally cure those of our island who are afflicted with them, if they flee to those regions any reasonable time before nature be quite worn out). For though the inhabitants of Britain live, for the most part, as long, or rather longer than those of warmer climates, yet scarce any one, especially those of the better sort, but becomes crazy, and suffers under some chronical distemper or other, before they arrive at old age.

The same reason is to be assigned for the frequency of self-murders here, in England especially, beyond any other country; for few have grace and resignation enough to suffer patiently the lasting pains of a chronical distemper, or the yet more torturing and crucifying anguish of a perpetual dispiritedness; though I have observed generally, and have good reason to conclude universally, that all

self-murderers are first distraeted and distempered in their intellectual faeulties. Notwithstanding the diffusiveness and universality of this disease, so that scarcee a single individual of the better sort is altogether free from it; yet I never once in my life saw it totally extirpated in those who had it to any degrec, so as to be entirely free from it all the rest of their lives after; but that it still appeared, and sprang up again in some symptom or other, and at last brought forth that grand one, which put a final period to all their sufferings. One good reason for this is, that it requires a regimen and eonduct so entirely contrary and opposite to the natural habits and customs, and the universal bent and appetites of the inhabitants of this island, that it becomes a kind of perpetual self-denial to them; which the British nation, in general, does not mightily admire. Another reason is, that fine folks use their physicians as they do their laundresses, send their linen to them to be elcaned, in order only to be dirtied again. Nothing less than a very moderate use of animal food, and that of the kind which abounds least in urinous salts (as most certainly the young and the lighter-coloured do), and a more moderate use of spirituous liquors, due labour and exereise, and a careful guarding against the inconstancy and inelemency of the seasons, ean keep this hydra under; and nothing else than a total abstineñce from animal

foods, and strong fermented liquors, can totally extirpate it : and that, too, must be begun early ; before, or soon after the meridian of life ; or else there will remain too little oil in the lamp, the spirits will sink too far, ever to be recovered again ; and the remaining part of life will be too short for so total a change as must be made. So that those who suffer greatly under this British distemper, must be contented to bear and forbear a little, and must expect no greater degree of health than their time of life, the nature of their disease, and the state of their constitution, will admit of. But still a great moderation in animal foods, and spirituous and fermented liquors, due exercise, and a care to fence against the injuries of the weather, will make life tolerably easy ; especially if some gentle domestic purges be interspersed. The seeds and young sprouts of vegetables have scarce any gross, fixed, or essential salts at all in them. This is not only evident from the reasons formerly given (because they are young, or the nourishment appointed by nature for young vegetables ; for the earth is only a proper nest or matrix for them ; and the sun's heat serves them instead of incubation), but, upon trial and examination, they yield none, being too light and thin to caline and ineinerate, and the salts too volatile (and consequently small and fit to pass by perspiration, and thereby can be no way injurious to human constitutions) to endure the

fire ; which full grown plants, their stalks and wood readily do. And, in unfermented liquors, the salts are so enveloped that they cannot unite to form a spirit, and are so sheathed, by particular coats of the materials of the vegetable, that they can scarce do any harm (except when they exceedingly abound) to animal bodies. Hence it comes to pass, that a vegetable diet for a few weeks or months, together with drinking water or unfermented liquors (such as tea, coffee, barley water, liquorice water, teas made of oranges, or other seeds and plants), will fasten the teeth when dropping out, from a consumption of the gums by scorbutic salts, cure any cutaneous foulnesses or eruptions, and even any spreading ulcer, if it is not scrofulous, when no medicine on the face of the earth will touch it. Hence the grand maxim, in the cure of all ulcers, is, by diet to bring them to the state of a wound, and then they will cure themselves. And as I have elsewhere observed, there is scarce a thin, consumptive, hysteric, or hypochondriac, and weakly constitution in England, which has not for its parent a latent or manifest scorbutic cachexy, excepting that which arises from a scrofula. From the whole, we may gather how much a proper regimen of diet and due exercise, with the other helps and remedies already mentioned in this treatise, is able to do in most British chronical distempers.

Having had so often occasion to speak of weak and relaxed nerves, it will not be amiss to suggest some of the outward and most sensible signs and characters, whereby it may be manifest, whether one's self, or any particular person he is concerned for, be of this make and constitution, before some chronical distemper or other dismal symptom has made it plain, in order to prevent these as far as possible. To which purpose we must observe, that the nerves are bundles of solid, springy, and elastic threads or filaments (like twisted cat-guts or hairs) whose one extremity is terminated at the common sensory in the brain, where the soul is supposed to reside ; the other is interwoven into every point of the scarf-skin, the membranes, the coats of the vessels, the muscles, and the other sensible solids of the body, in order to convey the motions, actions, vibrations, or impulses of outward objects to the soul. These threads, or filaments, are highly elastic or springy, as we may see from their hardened substances, such as whale-bone, ivory, horn, and cartilages, which are more eminently so than any other bodies known. Some persons have their fibres very quick, readily vibrating, highly springy and elastic, so as to tremble and shake violently, by the least impulse. Others have more rigid, firm, and stretched fibres, which yield but not to strong impressions, and move slowly, but move for a long time. Lastly,

there are those who have weak, loose, slender, and relaxed fibres, which though easily moved, and yielding to the weakest impulse, yet communicate only imperfect, languid, and faint impressions and vibrations to the soul, and have all their other animal functions of the same languishing nature. And it is of these last I have been all along speaking. And we may readily discover them, by these outward characters and signs :—

Those who have naturally soft, thin, small, and short hair, are of a loose, flabby, and relaxed state of nerves. For the hair seems to be some of the fleshy fibres, only lengthened outwards and hardened. At least, like the fibres, they consist of a great many smaller filaments contained in a common membrane, are solid, transparent, and elastic; and, as these hairs are in strength and bulk, so generally the fibres of the body are.

Those of the fairest hair are of the loosest fibres (other things being equal) because the fairest are more rare, porous, and fungous; and because bodies of the lighter colours, consist of smaller parts, than those of the more flaming colours, as has been formerly observed.

Those of large or (as they are called) mastiff muscles, and of big bones, are generally of a firmer state of nerves than those of little muscles and bones. Because the muscles and bones, being similar to their fibres. as is highly probable, and

these being bigger, and consequently stronger, so must those be, and on the contrary.

Soft, yielding, pappy flesh, is a sure symptom of loose fibres ; whereas hard, firm, and unyielding muscles, are the constant sign of firm fibres.

A white, fair, blanched or ashen-coloured complexion or skin, constantly indicates a weaker and more relaxed state of fibres, than a ruddy, fresh, dark, sallow, or black hue ; for reasons already given.

A fat, corpulent, and phlegmatic constitution, is always attended with loose, flabby, and relaxed fibres, by their being dissolved and oversoaked in moisture and humidity. And, on the contrary, those of a dry, clean, and firm make, have strong, firm, and tense fibres.

Those who are subject to evacuations of any kind, in any degree greater than what is natural ; and those who, by any accident, have suffered long by any preternatural evacuation whatsoever, are, or become, of loose, relaxed fibres and nerves.

Thus those who frequently run into purging, or floods of pale water, flow at the mouth or nose, or melt into profuse sweats, those who any way have lost much blood, have had a *diarrhæa*, have recovered of a fever ; and those of the sex who have purified longer or more than is usual ; all of these are originally, or become accidentally, of weak and relaxed nerves and fibres.

Lastly, those who are of a cold constitution, are apt to run into coldnesses on their extremities, or ready to catch cold, are also of weak and loose fibres and nerves; because these are signs of a slow and interrupted circulation and perspiration; which manifests a weak spring in the fibres of the coats of the vessels, the fibres of the muscles, and a weakness of the spring of the scales of the scarf-skin.

On this occasion of rehearsing the signs of weak nerves, I cannot omit apprising those of the breeding part of the sex, and those who are concerned in them, of their readiness of miscarrying, unless duly tended and managed, especially, those of them of tender and weak nerves, or of too delicate a constitution. The signs I have now laid down will always make it evident, if any particular person is so or not. And if, upon examination, they be found to be such, they will be apt, upon the slightest occasion, to run into frequent miscarriages; whereby a great part of their posterity will be destroyed, and they themselves exposed to dropsies or consumptions, or (which is worse than either) perpetual lowness of spirits, vapours, and other hysteric disorders. And by this misfortune alone, a considerable part of the better sort here in England perish and are lost.

Nature has formed the generality of the sex of a soft, slender, and delicate make. Want of due

exercise, a full table, indiscreet nurses, over-fond mothers, and hereditary sharpnesses, make them much more so. And if, by neglect or accident, they once begin to miscarry, every first miscarriage paves the way for a second, and a third, and so on, till the poor creature has neither blood nor spirits, appetite nor digestion, left. For one miscarriage weakens the constitution, breaks and tears the nervous system, more than two mature births. If ever this is to be secured or prevented effectually, it is to be done, at least attempted, in the first instance, if possible, at least as soon as may be, before a total relaxation and dissolution of the nervous system is brought on. The giddiness, romping, and gadding about of the young creature herself, is often the cause of her miscarriage. But oftener the forwardness and indiscretion of surgeons and midwives, by bleeding on every little threatening symptom, without considering the constitution. Bleeding may do well enough in sanguine, robust, and plethoric constitutions; but it is death and certain ruin to those of slender and weak nerves, and the surest way to cause the miscarriage it is designed to prevent, by relaxing the nervous fibres; which bleeding does as certainly as it lessens the quantity of the blood. The most effectual method, I have ever found, to prevent such misfortunes, is, to order those in such circumstances to drink red wine diluted with water for their constant

drink; and to keep them to a low, light, easily-digested diet, especially of the farinaceous vegetables, and milk meats; to strengthen their bowels with diascordium and toasted rhubarb, if they become too slippery; to air them once or twice a day, in a coach or chair, and to keep them cheerful, and in good humour, as much as may be. This method will scarce ever fail, unless a latent scrofula, or some other hereditary sharpnesses in their juices, destroy the birth.

The tender, sickly, and those of weak nerves, ought to have a regard in the conduct of their health, to the different seasons of the year. I have elsewhere observed, in my 'Essay on Gout,' that such constitutions begin to sink, droop, and languish, about Christmas or Mid-winter, go on from worse to worse till the spring is over, get up a little, as the sun grows higher and stronger, arrive at their meridian altitude of health and strength about Midsummer, and hold it out so long as the sun warms them, or the strength they have acquired lasts. Those who have very weak nerves fail sooner, even about the autumnal equinox; but they get up sooner, because their weaker nerves make less resistance. The sun now ferments, rarifies, and exalts their viscid juices; so that the circulation is better performed, more full, free, and universal. The perspiration is also thereby much increased and promoted: and the load being drawn

off, by the force of the sun's heat, their appetite is sharpened, and their digestion mended: to which the serene, warm, and clear air, and the greater liberty of exercise and business contributes. I should advise such, therefore, religiously to follow the indications of nature, and to take these benefits it offers then, as a certain sign of their being best and fittest for them. After Christmas, and in the beginning of the spring, milk, eggs, and spring herbs, as asparagus, spinach, and sprouts come in first: of which, I advise them to make the greatest part of their diet then. As the spring advances, lamb and veal, green peas and sallading abound. After the vernal equinox, chicken and rabbit, young turkies, and early fruit come in season. About Midsummer, mutton and partridge, cauliflower and artichoke, may be had; and Autumn brings in beef and venison, turnip and carrot: and it will be found the concoctive powers of weak persons, and those of relaxed nerves, rise and fortify gradually, as these stronger foods come in season. By season, I mean not those earlier days, that luxury in the buyers, and avarice in the sellers about London, have forced the several kinds of vegetables and animals in: but by season I mean, that time of the year, in which by nature, common culture, and the mere operation of the sun and climate, they are in most plenty and perfection in this country. But the principal point I would urge is, that such persons would re-

gularly begin to correspond with nature, in both lessening the quantity, and lowering the quality of their food, as the seasons indicate, and Providence provides the proper food in greatest plenty and perfection; by which they will preserve the balance of their health pretty near equal all the year round, have the lightest and least food, when their concoctive powers are least, and their nervous fibres weakest, and rise in the food in proportion as these rise. Add to these, that as winter is best for home exercise, summer is fittest for those without doors: and as the day lengthens, their labour and exercises abroad ought to be lengthened out. Neither Sydenham nor Fuller have been able to tell the half of what obstinate exercise will do, in low cachectic consumptive cases.

Labor omnia vincit improbus.

HORAT.

Unwary'd exercise will overcome any chronical distemper.

The Germans have a proverb, that wise men ought to put on their winter clothes early in autumn, and put them off late in the spring; by which they would insinuate, that people ought always to go well clothed. Whatever may be in this, as to persons that drink hard, and require a plentiful discharge by the skin, those who are sober, or who would render themselves hardy, ought to accustom themselves to as few clothes, both in summer and winter, as is possible. Besides the

general rule, of having a few necessaries as may be, much and heavy clothes attract and draw too much by perspiration ; as Dr. Keill proves, in his *Med. Static. Britann.* tender and debilitate the habit, and weaken the strength. The custom of wearing flannel is almost as bad as a diabetes. Nothing can enfeeble and drain weak and tender persons more. To make this clear, we must distinguish between perspiration and sweating, which differ as widely as the daily natural emptying our bowels, and a looseness, or diarrhœa. And as nobody in their senses, much less the tender and weakly, would endeavour to encourage this last ; no more ought they that other of sweating : for, as promoting slippery bowels would always keep the fibres of the alimentary passages relaxed, so would perpetual sweating those of the skin ; and as the moisture and damps that flannel perpetually keeps the skin in, and its growing so readily dirty, shews what a flux of perspiration it promotes there ; so the perpetual friction produced by it gives the reason. If one lays on a superfluous load of strong liquors, it is happy for him nature discharges the ocean any how ; for he had better sweat than burn in a fever : but for temperate, tender, and sickly persons, the more firm and tight all the organs of their evacuations be (if they be not totally obstructed), the better it will be for them, the more it will strengthen their nerves, and harden their consti-

tution. Nothing but superfluity in food or strong liquors requires sweating ; and that is the reason the Germans run so much upon it ; so far, that Tschirnhaus, a very learned and ingenious gentleman, otherwise resolves the cure of almost all distempers into sweating, upon observing its success in their bottle fevers. They drink much thin sharp wine, which passes every way ; and when it comes through the skin, both the conflict and the danger is over. But for those inhabitants of our islands, who are sober because they are tender, or would preserve their health ; the lighter and fewer their clothes are, both by night and by day, in summer and in winter, the hardier they will grow. The more open the whole body is to the air, provided it be benign, the more fluid, and the more active, will the animal juices be ; and, by consequence, the more full and free will the perspiration be. For right tempered air is beneficial and medicinal to the animal juices : and a great heap of clothes only condenses our own excrementitious atmosphere about us, and stops the kindly influence of this beneficial element. As to catching cold, he that lives soberly, and avoids nitrous, that is moist or frosty air, will either not readily catch cold, or if he does, will soon get rid of it. It is only air thus conditioned, that thickens and coagulates our juices, and gives painful and dangerous colds. It is inward heat only which destroys us. No sober

persons ever suffered by cold, unless it were extreme, or that they expose themselves obstinately to it, against sense and reason.

We know, by the ticklishness of the soles, what a multitude of fine nervous fibres terminate in them. Walking, standing, and treading, render them callous, and the skin thick and hard ; which much injures the perspiration, and hinders the derivation of the blood and spirits into them. And it is a common observation, that nothing is a surer sign of strong and rank health, than a kindly heat, and a profuse perspiration on the feet. It shews a full and free circulation in the small vessels, at the greatest distance from the source of heat and motion ; than which nothing can more plainly indicate great and good health. On the contrary, weak and tender persons are always cold in the legs and feet, and first of all feel cold there in frosty weather. Let the tender, therefore, and the weakly, duly once a week wash in warm water, rub, scrape, and parc their feet and nails ; which will likewise prevent corns, hardnesses, and the unnatural tendency of their nails into the flesh. These are, it is true, but low and seemingly trifling observations towards health ; but it is in this ease, as it is in a more momentous one, ‘ he that despiseth little things, shall perish by little and little.’

Those tender and valetudinary people, whose studies or profession oblige them to read or write

much, ought, as far as they possibly can, to stand in an erect posture, bending their head and breast as little as may, leaning only on a sloping desk, and continuing their exercises in that posture, until they grow weary; then rest, and be at it again. Custom and practice, obstinately persisted in, will at length render the posture easy to them. And it is inconceivable how many and great advantages it will bring to the constitution. Sitting, bending, and leaning low, compress some, if not many of the vessels of the body; and so stop and retard the circulation of the blood and juices through them, which makes a more ready flux through the other more patent and pervious ones: whence that sleepiness and disability to motion in the limbs, till the blood and spirits, by a proper posture, get a free admittance into them. From this also there ensues an unequal and subsultory circulation of the juices, and an unequal secretion in the glands; and, consequently, an unequal growth, strength, and vigour, of the organs and parts, which is the cause of rickets in children; careless nurses, neglecting to rock, dandle, and toss them sufficiently, that the circulation of the juices and spirits may be equally promoted every where. And to avoid this inconvenience seems to be the reason why the Romans and the eastern nations lay along, at their great meals and feasts, and when they were obliged to continue long in one posture. Besides that, in

writing or reading, if one sits, there is a constant pressure on the cavity of the breast and stomach, which must necessarily weaken their functions; and these are commonly the organs which first decay in clerks and under-secretaries. And hanging down the head is the ready way to raise fumes and vapours to it, whereby such will be exposed to lowness of spirits, and perhaps consumptions; all which are, in a great measure, avoided by an erect posture; for thereby all the organs will be in their natural situation. Many of the muscles will be in action, and so press on the blood-vessels, to facilitate the circulation; but chiefly, by this erect posture, the juices will have the advantage of their own gravity, to descend with the greater velocity, to warm and cherish the lower parts, which are remotest from the source of motion; and the grosser evacuations will be more readily promoted, and thereby preserve the upper regions clear and serene, which will bring great advantages towards health and long life; but this practice will never become easy, unless to those who begin young. Those who dictate or consult, ought to do them standing or walking, which would relieve both body and mind.

The unwieldy, fat, and overgrown, besides the rules already laid down, I advise, in particular, as much as is possible for them, to abstain from drink of all kinds. No one rule or condition ever was

contrived, or can be of so great use, to preserve and lengthen the lives of such, as an obstinate and universal abstinence from all kinds of liquors. If the doctrine be true (as it is highly probable), that the mass of all the bodies of vegetables and animals is only pipes, and vaseular tubes, formed all at once, in their first rudiments and seeds; then growth and increase of bulk is only filling and plumping up, dilating and unfolding these pipes with liquors. We know from Kircher's and Dr. Woodward's experiments, to what bulk vegetables will thrive, by mere element alone. Two pigs, of the same litter, were fed upon an equal quantity of milk; only, to one of them, the milk was mixed with the same quantity of water. After a month's feeding they were both killed, and that which had the water was found much larger and fatter than the other. Dropsies (at least anasareas) have been cured by an obstinate forbearance of drink. And lethargies proceed from the moisture of the brain. And these are the two distempers unwieldy, fat, and overgrown persons are most subject to. Therefore, such ought to avoid drink as those do who have the hydrophobia, or are bit by a mad dog; which they may easily bring about, if they feed only on young animal, and moist and cool vegetable food. But whenever I speak of vegetable food, I mean that which is dressed by fire.

To the aged, and those who are passing off the

stage of life, I have only two things to recommend, if they would make the last hour as easy, indolent, and free from pain as may be. The first is, that they would avoid the injuries of the weather as much as ever they can. The blood of the aged is ever most certainly poor and viscid; their perspiration little or none at all; and their concoctive powers weak; and, consequently, they must be subjected to, and suffer by the weakest injuries of the weather: therefore, I advise such to keep home, provide warm rooms and beds, and good fires, whenever the sky lowers, winds blow, or the air is sharp. Such are not to expect to raise, improve, or exalt their constitutions or health. Freedom from pain, to prevent the vital flame being extinguished by accidents, and to have it burn as clear, and as long as nature, at their age, has designed it should, is all they ought to aim at. Exercise is only to purge off superfluities. If these, therefore, be careful not to exceed, they will want none, nor would it much contribute to their ease. For in old men the bones petrify; the cartilages and tendons turn into bones; and the muscles and nerves into cartilages and tendons; and all the solids lose their elasticity, and turn, in a great measure, into that earth they are going to be dissolved into. So that the solids wanting elasticity, exercise can do but little to shake off the load. It will, therefore, be enough for such to air them-

selves when the sun lights them, and the summer breezes can refresh them; or, if they would lengthen out their days, to remove to a warmer climate, by which they may live as long as the crow.

The second thing I would advise such is, to lessen their diet gradually as they grow older, before nature has forced this diminution upon them. These are powerful means to make their old age green and indolent, and to preserve the remains of their senses to the very last: by these alone, Cornaro lengthened out his days, and preserved his senses, in a great measure, entire to a hundred years. He gradually lessened his diet so far, that, as his historian informs us, he came at last to live on the yoke of an egg three days. I will not take upon me to advise others, in what measure, either of time or quantity of food, they ought to diminish; but this, I think, they ought to consider, that since it is certain aged persons become children, as to the weakness of their digestions, they ought to diminish, as children increase in their food, from weaker to weaker, and from less to less. For as their solids are unelastic, their concoctive powers weak, their perspiration little, and the expences of living scarce any, their repairs (not to overlay the spark of life remaining) ought to lessen proportionally. And it is to the neglect of this, in aged persons, that those rheums, catarrhs, wind and cholics, loss of memory and senses, those aches

and pains, and all that dismal and black train of miseries, that wait on long life, is mostly owing; which, by a discreet and timeous lessening their diet, might, in a great measure, be prevented.

There is no mistake more fatal in the cure of chronical distempers, incident to the weak and tender, than the vain and unjust expectation they entertain of a sudden and quick cure, or even of a sensible relief. This, with their inconstancy, and impatience of being confined in their appetites, makes them either throw off all remedies and restraints in despair, and give themselves up to an habitual indulgence in all those things that brought on or exasperated the distemper, or run about changing, from doctor to doctor, till they end with a quack, or die under the hands of a mountebank, and are fooled out of their lives and money at once. It is surprising that reasonable men can imagine, that, in any small time, any possible methods or medicines should cure, or even sensibly relieve a distemper that perhaps was brought with them into the world, and interwoven with the principles of their being; or, at least, may have been ten or twenty years in breeding, by excesses, or an indiscreet regimen. I know no fitter similitude of the case, than the annual income of an estate just sufficient to keep one in decent necessities, and due plenty and cleanliness. If any one that has such an estate run out every year, for ten or

twenty years, and then set about to retrieve, before he come to starving or a gaol, would we not count him mad, if he should imagine, by retrenching, management, or saving, even joining to those day labour, that a few months or years would recover all, and bring his estate to its first condition. No! he must labour, abstain, and manage for several years; and the time required will be always in a proportion compounded of the rate of his former expences, and his present saving; that is, if his expences were but small, and his savings great, the time will be the shorter, in respect of the time he continued his overspending. If he gives over saving, he must at last most certainly starve or go to gaol; and if he begins to save in due time, he will certainly retrieve all; but the whole consists in labour and saving for a due time. Excesses, and an undue regimen, is running out of one's health; which, without a proper remedy, as labour and abstinence, will necessarily bring a man to diseases or death; and these must be continued a time proportioned to the greatness of the excesses, with regard to the labour and abstinence.

Most chronical distempers have, for their parents, corrupted fluids and broken solids, as has been shewn. A bad state of the stomaeh and alimentary organs, either beget these or accompany them. Suppose, for example, the case be a scorbutic habit, shewing itself with blotches and a watery

ichor, or bumps, with yellow or black spots on the skin, a thick, viscid, rheumatic blood, an obstructed liver, and a constant overflowing of the gall, oppression of spirits, want of appetite and digestion, and thereby a wasting lassitude, inquietude, &c. which I have often met with in your bon vivants, and your free livers, who have been born healthy, vigorous, and lively; I know no way in nature to relieve and effectually cure this case, but by often repeated gentle vomits and stomach purges, as the choler (which certainly degenerates into phlegm, before the cure be brought about; for phlegm is but choler more diluted, or the grosser part of the serum only, as choler is that of the whole arterial fluid; and when choler is come to phlegm, the cure is half carried on, one part of the fluids being already purified, and the liver free and open; as the choler, I say,) and the phlegm rises and loads the alimentary passages; bitters, aromatics, and steel, varied and prescribed according to the strength of the patient, and one kind or another has lost its virtue; chalybeate and mineral waters, constant labour and exercise; a cool, light, spare diet, and constant proper regimen, long and obstinately persisted in. The patient will often complain, what! vomits and bitters, galloping and fasting for ever! vomits only relieve for a few days, but do not cure: we grow as bad as ever again, and after some months perseverance, find

ourselves just where we began. New doctors must be had, and they must either be cashiered if they pursue the same intentions (which, if they be honest men, they must do), or else must write things that can neither do good nor harm, or those which will actually hurt, for their fees (for there is no medium), till the miserable person has run through the whole faculty, and at last got into the Charlatan tribe. It is certain, that when nature has begun to throw the gross and viscid parts of the juices on those loose and spongy glands, it will continue so to do, till it has deflegmated the whole mass; and every new vomit will make room for another; and there is no other remedy as long as there is any viscid humour remaining, nor can the decline of the disease be discovered so certainly by any thing, as by the lessening of the quantity excreted, and the lengthening of the intervals; as, in a vessel of oil and water incorporated, a sure way to separate the oil from the water is, to skim it off as it comes to the top. Now, as long as there is any oil remaining it will swim, if you but give it time to extricate itself from the embraces of the water, and then you may separate the viscid mixture entirely. No great purpose in life was ever brought about but by time and patience, and by constantly pursuing the most natural and best approved means that lead towards that end. Nature works not by sudden jumps and starts, but goes on steadily, *forte-*

ment and *doucement*, and it is nature that is the true physician ; art only removes obstacles, checks violences, and gently solicits nature the way she tends. This requires time and patience. *Tempus edax rerum*. It most certainly consumes chronical diseases, if not fuelled and fed ; nothing else can.

In fine, Providence has been kind and gracious to us beyond all expression, in furnishing us with a certain relief, if not a remedy, even to our most intense pains and extreme miseries. When our patience can hold out no longer, and our pains are at last come to be insupportable, we have always ready at hand a medicine, which is not only a present relief, but, I may say, a standing and constant miracle. Those only who have wanted it most, and have felt its friendly and kind help in their tortures, can best tell its wonderful effects, and the great goodness of Him who has bestowed it on us ; I mean opium, and its solution laudanum, which, when properly prescribed, and prudently managed, is a most certain and sudden relief in all exquisite and intense pain. The manner of its operation may be gathered from the observations I have made in the preceding treatise. Pain constricts, crisps up, shortens, and contracts animal fibres. It acts like a wedge in tearing, rending, and dividing these small filaments ; it does to them, in a living body, what the points of salts do to all animal substances, which are to be preserved for

food, viz. hardens, stiffens, and contracts them. The fibres of live animals being contractile, tonic, and springy, when a hard-pointed body enters them (which is the case in all bodily pain), the parts, by their contractile nature, fly from, recede, and shun, as much as possibly they can, the wounding instrument. This appears in the large gash of a wound, made across the fibres of a muscle; in the continual bending towards the other side, when any part of one is pained; in the cramps and convulsions, nay, and sometimes fevers, produced by intense acute pain. Pleasure, on the contrary, relaxes the fibres by a gentle, soft, and bland, or (as the mathematicians speak) a commensurate and harmonious touch. It acts on the fibres as two unison and concordant musical instruments act on one another, and by stroking, softening, and smoothing, comes at last entirely to relax and unbend them. The parts of the fibres run after, follow, and pursue, and at last break their union in some degree, to reach such a demulcent touch. Some persons have had the faculty to allay pain, by gently smoothing the afflicted part with their hands; which, in some measure, was true of the touching doctor. Soft oils, and emollient herbs, with gentle warmth, by relaxing the crisped fibres, will allay pain. Soft beds and clothes, and tepid baths, will relax and weaken the whole habit.

Now since pain so certainly crisps up, constricts,

and contracts animal fibres, and since opiates infallibly, if duly dosed, relieve and ease pain, I can see no possible way it can effect that, but by relaxing and unbending these fibres as much, or near as much, as pain contracts and draws them up: and that this is the real fact, we may observe from many effects of opiates. Nothing is so powerful, or so certain a diaphoretic as an opiate. Nothing causes such plentiful sweating, especially if joined with volatiles, and promoted with plentiful drinking small warm liquors: this it can do only by relaxing the fibres of the skin and perspiratory glands. Nothing so much pall the appetite, and weakens the first digestions, as the frequent use of opiates; insomuch that most people, after a liberal dose of them, seldom fail to retch, and never care for food for a considerable time after, till their effects are wrought off; which are the constant symptoms of a relaxed stomach and guts. Nothing so much promotes the eruption of the small-pox and the measles, the expulsion of the stone and fœtus, the monthly, and the after-birth purifications of the sex, as opiates: these effects they can produce only by relaxing those fibres pain has contracted and rendered unelastic in some measure. Nothing quiets and stops cramps, convulsions, and hysteric fits, so suddenly and certainly as opiates do; and every one knows these arise from violent contractions, and crisping up of the muscular

fibres. All these, and many more such effects, opiates produce, by unbending, loosening, and relaxing those fibres violent and acute pain had constricted and contracted, and by giving a respite and reprieve from its tortures, and thereby allowing nature (the only true physieian) to go undisturbed about its own work. The way it stops purging, and cures a diarrhœa, I take to be by carrying off the sharp and watery humours in the bowels by perspiration, which opium exceedingly promotes, by quieting those spasms and convulsions, and allaying those stimulations excited by purging; and settling and calming the violence of the peristaltic motion of the guts, which hurries off their contents.

I will not take upon me here to determine the proper cases for opiates, or their doses. That is the business of the physieian. But in general I may say, wherever pain is acute, intolerable, and past enduring, where it may endanger convulsions, a fever or inflammation; after premising the proper universal evacuations (such as bleeding, blistering, cupping, purging, or glistering, as the case requires, or will bear), opiates then will most certainly relieve, and may be safely administered. If the case is attended with vomiting, solid opium will do best; because it will be in a smaller volume, and will not be so readily rejected. If speedy relief be required where there is no vomiting, then lau-

danum will disperse soonest through the habit, because liquid, and joined with a spirituous vehicle, will soonest effect the design, raise the oppressed spirits more, and penetrate deeper and quicker. In common cases a vinous vehicle will be sufficient, because opium is best dissolved in wine, to make laudanum. There are four cases, in which it is absolutely and eminently necessary; the cholic, the stone, the hard labours, after-birth and monthly sluggish purifications of the sex, especially if attended with violent pain, as is common in such cases; and in the gout and rheumatism. In the first, it ought always to be given with some stomach purge, as elixir salutis, or tincture of hiera picra, with syrup of buckthorn, and in those of more tender bowels, with tincture of rhubarb; especially if the cholic is in the lower bowels, and attended with no vomiting; in which case an artificial vomit is to be premised, if circumstances forbid it not. In the stone, it ought to be given with oil of sweet almonds, or in some soft emulsion, to lubricate the parts. In the two last cases, it ought always to be given with proper volatiles, anti-hysterics, and attenuants. In violent and acute pain, the first dose ought to be large, at least from thirty to forty-five drops of liquid laudanum, or its equivalent in opium, from two grains and a half to three and a half; and afterwards to be increased by fifteen drops of liquid, or half a grain

of solid laudanum every half hour, till the pain begin to remit, and then an entire stop is to be put to its administration; and thus the end will be obtained without any fear of over-dosing. And the truth is, there is less hazard of that than persons are aware. If the preceding dose be rejected, by vomiting, about a third part may be supposed to stay; and then the subsequent doses may be proportioned accordingly. The difference of constitutions will make no great alteration here, since very weak persons seldom suffer very violent pain, which is the only ease I am here considering.

To draw towards a conclusion. The grand secret and sole mean of long life, is to keep the blood and juices in a due state of thinness and fluidity, whereby they may be able to make those rounds and circulations through the animal fibres, wherein life and health consist, with the fewest rubs and least resistance that may be. In spite of all we can do, time and age will fix and stiffen our solids. Our original frame and make renders this unavoidable and necessary.

As in the greater world, the quantity of the fluids is daily lessening and decreasing; so in our lesser world, after a limited time, the appetite and concoctions failing, the fluids are lessened and spent on the continual repairs of the solids, and thereby lose their nature, and become firm and hard. For, by insinuating themselves into all the pores of the

solids, and the interstices of their parts, and straitening and damming up the small vessels, which carry in nourishment to the internal substance of the solids, and so depriving them of their moisture and lubricating juices; these solids come at last to harden, stiffen, and fix, and thereby lose their elasticity and springiness. Here the process is mechanical and necessary. Age and time, by weakening the concoctions, impairing the natural heat, which consists in a brisk and extended circulation of the juices, by the turning those juices into solid substances, and thereby fixing and hardening these solids, and depriving them of their due elasticity, the fluids circulate with less velocity and force, and seldom reach the extremities and smallest vessels, but pass through the more patent and larger vessels, by their biggest lateral branches. And if, with all these unavoidable and irremediable circumstances, both the nutritious and serous part of the blood, and the globular, become viscid, thick, and gluey, the circulation must stop at last, and come to an end.

Now it is certainly, in a great measure, in our power to maintain the juices in a due state of fluidity and thinness, and to render them such, if they are not corrupted to an extreme degree, so that the remaining part of life be not too short for such a tedious work. We certainly may dilute and thin any fluid that has an inlet and outlet; and the

more fluid a circulating liquor is, that is, the smaller and finer its parts are, the less force it will require to set it a going, and to continue its motion ; and in animal bodies, the thinner and more fluid the juices are, they will not only circulate by the less force, and with less resistance (*i. e.* pain), but also they will preserve, by their circulation, the solids the longer from stiffening and hardening. There is not a more mischievous, nor greater mistake than the common one, that thin blood is poor blood, which the vulgar and herd of mankind are as terribly affrighted for, as outward poverty and want. For, on the contrary, the thinnest and most fluid blood is the richest, that is, the best blood (if rich and good mean the same thing) : for, in hydropical, anasarcaous, cachectic, and scorbutic persons, both the serous and globular part of the blood is thick, gluey, and acrimonious ; so that it can neither get through the small vessels, nor can it be long contained in them, but corrodes and frets them, and so falls (at least the thinnest part of it) into the cavities, and begets a dropsy ; or steps in and obstructs these small vessels, and so becomes an anasarca or scurvy. In all which cases the serous part is overloaded with urinous salts, and becomes to persons a perfect lixivium ; so that, by its grossness, it cannot run into globules, to facilitate the circulation through the capillaries (for these small elastic globules, by turning oval or oblong, wonder-

fully facilitate the circulation of the juices through the small passages) and the red or globular part becomes a mere cake of glue; and thus the quantity of serum is increased, and the quantity of the globular part gradually lessened: and in this sense (of a greater proportion of serum) this state of the blood may be called thin; but it can in no sense be called good blood. The thinnest and most fluid blood is ever to be looked upon as the best blood, as consisting of finest and smallest parts, which most readily runs into red globules, and most easily circulates through the capillary vessels, which is the most solid foundation of good health and long life. Now, as nothing but indulging in strong high foods, which the concoctive powers cannot break and divide into parts small enough to run into red globules, or circulate through the small vessels, but overstock them with urinous salts, which run into clusters, and first obstruct and afterwards break these small vessels, and in wallowing in strong liquors, which parboil and eat out the tender and delicate fibres of the solids; I say, as nothing but such an indulgence, and such excesses, long continued and obstinately persisted in, can beget such a state of the fluids and solids, and so bring on a cachexy, which may end in a dropsy, or some other fatal chronical distemper, according to the habits and particular make and constitution of the party, (for no person had lived low and meagre,

and drank only small and thin liquors, ever became hydropical, if his solids were originally firm, and his fluids not tainted with some hereditary sharpness); so I know nothing under the sun, that can solidly and fully effectuate the contrary state of the blood and juices, to render them thin, sweet, and in a constant flowing condition, but taking the contrary measures, and keeping to a strict regimen of a thin, fluid, spare, and lean diet. We have no possible way to attenuate, clean, and dilute a vessel full of gross, gluey, and foul mixtures, that has only a small inlet and outlet, but by pouring into it a thin, clear, insipid fluid, and by shaking it often and much. It is much the same with an animal body.

No voluptuous nor lazy person, unless he has had an original constitution of brass, was ever a long liver ; and even then, as his life has been more misery and pain than ever a sober galley-slave endured, his end, and the latter part of his days, has been rack and torture, horror and despair. And though he has not had the hope nor consolation of a martyr, yet his sufferings have been far more exquisite and extreme. All those who have lived long and without much pain, have lived abstemiously, poor, and meagre. Cornaro prolonged his life and preserved his senses, by almost starving in his latter days, and some others have done the like. They have indeed thereby, in some measure, weakened

their natural strength, and qualified the fire and flux of their spirits; but they have preserved their senses, weakened their pains, prolonged their days, and procured themselves a gentle and quiet passage into another state. Gentle domestic purges, frequently repeated, due exercise, and the use of the other means prescribed in the foregoing treatise, will mightily contribute towards this end. But the ground-work must be laid, carried on, and finished in abstemiousness; and though not in absolute fasting (for that is no ways required, and would be prejudicial), yet in a thin, poor, low, light, and meagre diet. All the rest will be insufficient without this; and this alone, without these, will suffice to carry on life, as long as by its natural frame it was made to last, and will make the passage easy and calm, as a taper goes out for want of fuel.

MISCELLANEOUS RULES.

Chronical diseases last long, wear out the constitution leisurely, and are accompanied with a slow pulse; whereas acute ones soon terminate either in death or recovery, and are joined with a quick pulse.

The scurvy is the root of most chronical diseases of the British nation; and is a necessary consequence of their way of living almost wholly on animal food, and drinking so much strong liquors.

Soft, thin, small, short, fair hair, slender muscles and bones; soft flesh, a white, fair, blanch'd or

ashen-coloured complexion; a fair, corpulent, phlegmatic, cold constitution; chilliness, especially in the feet; a readiness to catch colds; and being subject to immoderate evacuations of any kind, are certain signs of loose, flabby, or relaxed nerves.

Women of weak nerves are very subject to miscarriages. Their danger is increased by high living, and indiscreet bleeding. The only remedy for them is red wine and water, with a low and light diet, going abroad to get air, and using proper medicines to corroborate their bowels.

The weak and sickly (as their concoctive powers fail in winter, and recover in summer) should carefully proportion the quantity and quality of their food to the strength of them in the several seasons.

The fewer clothes one uses, the hardier he will be. Flannel and great loads of clothes, by day or night, relax the fibres, and promote only sweating, instead of the natural and beneficial perspiration.

People that read and write much ought to do them standing, or in as erect a posture as they can. And those who can go about any part of their studies walking, should do it.

The fat, unwieldy, and over-grown, ought to avoid all manner of drink, strong and small, and even water itself, as much as possible. And if their food be vegetables and young animals, they will have little occasion for any liquor.

The aged should carefully guard against all the injuries of the weather ; and lessen the quantity, and lower the quality of their food gradually, as they grow older ; even before a manifest decay of appetite force them to it.

As chronical diseases are not brought on all at once, so they cannot be quickly removed. A gradual corruption must be gradually remedied. It is contrary to the nature of chronical diseases to be quickly cured.

In all acute and vehement pain, opium is the sovereign relief, particularly in the cholick, stone, gout, rheumatism, and hard labour of women. It operates by relaxing and unbending the fibres, over-stretched and crisped up by pain.

The great secret of health and long life lies in keeping the blood (and consequently the other juices of the body) in a due degree of fluidity.

CONCLUSION.

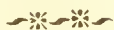
To conclude, without taking the benefit of revelation, which, in a sense relating even to our mortal bodies, has brought life and immortality to light ; if but the precepts of the Pagan philosophers were observed,

—————*Servare Modum, Finemque tueri,*
Naturamque sequi.—————

If men would but observe the golden mean in all their passions, appetites, and desires ; if, in all their thoughts, words, and actions, they would but mind, I will not say the end of their being and existence here, but the end to which their thoughts, words, and actions naturally tended in their last resort ; and lastly, if, in the gratifications of their appetites, passions and desires, they follow the uncorrupted dictates of nature, and neither spurred her on beyond her craving, nor too violently restrained her in her innocent bias, they would enjoy a greater measure of health than they do ; have their sensations more delicate, and their pleasures more exquisite ; live with less pain, and die with less horror. For had it not been for the lewdness, luxury, and intemperate gratifications of the passions and appetites, which first ruined and spoiled the constitution of the fathers, whereby they could

communicate only a diseased, crazy, and untunable carcass to their sons, so that, with the world's decay, viscious souls and putrified bodies have, in this our age, arrived to their highest and most exalted degrees ; I say, had it not been for these evils, there never had happened so much sickness, pain, and misery, such unhappy lives, and such wretched ends, as we now behold among men. But even in this our lapsed estate and condition, had the dictates of nature and reason, not to say religion, been followed, we might have passed our days in indolence (at least from chronical distempers) if not innocent pleasures, arrived at a good old age, with our senses free, and our rational faculties clear, and at last departed in peace, as a lamp goes out for want of life. And let the gentlemen of wit and fire, of banter and sneer, hug themselves ever so much in their boasted tranquillity and security, gratify their passions, appetites, and humours to the full, and despise futurity and whining ; I dare promise when the farce is ended, and the last minutes are drawing on, they would prefer a life thus led, and an end so calm, to all the pleasures of lewdness and sensuality, and the bounces of a false and ignorant security.

APPENDIX.



AGUE.

THIS disorder is generally occasioned by a residence near marshy ground, where the waters remain stagnant; though other causes will also produce it; such as lying in damp sheets, exposure to cold, or suppression of some long accustomed evacuation.

The fit should be put a stop to as soon as possible; and, during its intermission, means must be taken to prevent its return. To accomplish the former, warm fomentations should be applied to the feet, and the patient given warm diluent liquids; but the best remedy, perhaps, is about fifteen drops of tincture of opium; and, if warmth is not induced, from twelve to fifteen more may be given, which will seldom fail to give relief; and if repeated upon the return of the fit, will effect a complete cure in a few days.

APPETITE. (LOSS OF)

The causes are numerous which may produce a loss of appetite; such as the immoderate use of strong liquors, tobacco, opium, or other narcotics; immoderate repletion, deficiency of the secretion of bile, &c. &c.

A gentle emetic may be taken, in the first instance, to remove the erudities of the stomach; after which, to correct the morbid acidities, the following may be taken twice a-day:—Solution of potass, one drachm; lime, seven ounces;—*mix*. A table-spoonful each time.

Should the patient feel pain, attended by flatulency, he may take prepared chalk, twelve grains; peppermint water, half an ounce; pure water, one ounce; spirit of pimento, two drachms; tincture of opium, twelve drops;—*mix*. This draught to be taken three times a-day, with any gentle laxative, should the patient be inclined to costiveness.

ASTHMA.

The causes of this disorder are various, but any thing that impedes the free circulation of the blood through the lungs, or prevents their full expansion, will predispose to this disease. The symptoms are a difficulty of breathing, which sometimes increases to such a degree as to prevent the patient from lying down, for fear of suffocation. Asthmatic people always find themselves worse at night, and should guard against whatever is likely to bring it on; such as, exposure to night air, keeping the house in damp foggy weather, and abstaining from indigestible food. Whatever promotes expectoration should be taken for the *moist* asthma, as squills, a tea-spoonful of the oxymel of which, mixed with

an equal quantity of cinnamon-water, may be taken three or four times a day. After copious evacuations, large doses of æther have been found to remove a fit of the asthma. Asses' milk and cows' milk, taken warm, are also of great use. All heavy food should be avoided, and the patient should partake of ripe fruits. Strong liquors of all kinds should be avoided, as well as meat suppers.

BURNS.

In all cases of burns and scalds the best means and the most ready is to plunge the part into cold water, or to pump upon it is of the utmost service. Of late, the application of ice has been strongly recommended. Æther is likewise a most efficacious remedy, and may be applied by pouring a little of the liquid over the part, and immediately cause its evaporation by blowing on the place with a pair of bellows. This will allay the heat better perhaps than any other application, and may be continued till it has the desired effect.

COLD.

Illness of various kinds proceed from what is generally termed a cold, which almost in all cases proceed from a stoppage of perspiration. Of course, whatever will promote a return of that necessary evacuation, will be most likely to benefit the patient; lying longer in bed in the morning, drinking warm tea, or some other mild liquor,

bathing the legs and feet in warm water, will most probably succeed ; but care should be taken, on the first appearance of it, as it will then be the more easily eradicated.

COUGHS.

This is one of the results of a neglected cold, and, should the lungs be naturally weak, it very often happens that a consumption is the result.

In a common cough a syrup composed of lemon juice, honey, and sugar candy will be found efficacious, but should that not prove serviceable, the following may be resorted to : three drachms of balsam of tolu ; half an ounce of elixir of paregoric, and one drachm of tincture of squills :—*mix*. A large tea-spoonful to be taken at bed-time.

Should the cough proceed from the stomach, which will be easily known by the patient breathing freely without producing the cough, the following recipe will be of the utmost service :—One ounce of bark ; iron filings, one drachm and a half ; myrrh, two drachms ; syrup of orange-peel, sufficient to make an electuary. A dose about the size of a nutmeg to be taken three times a-day.

HEADACHE.

This disorder is generally symptomatic, though sometimes an original disease. It most frequently proceeds from indigestion, or the suppression of some customary evacuation.

The *sick headache* generally proceeds from a foul stomach, and is to be relieved by gentle vomits and aperients ; the *nervous headache* is often caused by flatulence ; in which case powdered ginger, taken in any common beverage, will have a good effect.

But an habitual chronic headache, from whatever cause it may arise, will be greatly relieved by the application of æther to the temples, keeping the feet warm, by wearing thick-soled shoes, &c. &c. Moderate exercise, avoiding full meals, and strong liquors, will, if not entirely remove, at least greatly mitigate the pain.

When fulness of the blood is the cause of headache, aperient medicines and blood-letting are necessary ; but when the system is relaxed, and in a weak state, tonic medicines must be resorted to : a tea-spoonful of tincture of calumbo, in about a coffee-cup full of camomile tea three times a-day, in the morning fasting, and every four or five hours afterwards, will be found, if persevered in for a month, of the greatest efficacy.

TOOTH-ACHE.

This excruciating pain arises from various causes, but most frequently from a carious, or rotten tooth ; in which case, it is best to extract it, not only to relieve the present pain, but to prevent its affecting the others.

The pain may often be relieved by purgative medicines, or the application of opiates ; but the Prussic acid has of late been used, with the utmost success, and is said never to fail.

EAR-ACHE.

The ear-ache proceeds generally from inflammation, and is often attended with some degree of fever. A little laudanum dropped into the ear, or occasionally filled with tepid water, will often relieve the pain ; but should that not succeed, a blister should be applied behind the ear, and kept open till the pain abates. In all slight affections this will be found efficacious ; but, in some cases, when the inflammation is very violent, recourse must be had to bleeding or cupping.

Should the pain proceed from any insect, or hard substance getting into the ear, a few drops of olive-oil should be dropped into it, and the patient made to sneeze by taking snuff. Should not this succeed, recourse ought immediately to be had to a surgeon aurist.

HEARTBURN.

This is an uneasy sensation of heat about the pit of the stomach ; sometimes attended with flatulence and difficulty of breathing, with retching. It generally proceeds either from bile, debility of the stomach, or a too frequent use of acid food, which ferments on the stomach. Those therefore,

who are subject to heartburn, should avoid all fat substances, acids, &c. Violent exercise, after a full meal, is also injurious. If it arises from indigestion, a dose of rhubarb will be necessary, and afterwards the peruvian bark, or any stomachic bitter infused in wine or brandy, and taken as a strengthener. When the disorder arises from acidity in the stomach, two tea-spoonfuls of magnesia in a cup of mint water will generally alleviate the pain; but a larger dose will not be hurtful, should that not prove sufficient.

RHEUMATISM.

Rheumatism is either *acute* or *chronic*:—the acute is preceded by shivering, heat, thirst, and frequent pulse; the pain soon commences in the joints, and is attended with fever.

The chronic rheumatism is generally confined to some particular part of the body—as the hips, loins, back, shoulders, &c. The pains of acute rheumatism are increased by heat, but those of the chronic by cold.

The suppression of perspiration is generally the cause of rheumatism—sleeping in damp beds, lying on the ground when damp, exposure to the night-air, &c. will also produce it, and we find it most frequent in variable weather during the spring and autumn.

For the acute rheumatism, frequent bleeding is

perhaps the best method ; the body to be kept open by cool opening liquors, such as decoctions of tamarinds, cream of tartar, whey, &c. The diet should consist of light broths or gruel, wholly abstaining from animal food, and every means used for promoting perspiration, such as warm bathing, &c.

In the cure of chronic rheumatism the same means, or nearly so, may be adopted, with the exception of the diet, which may be rather more generous, with a moderate use of wine. Exercise should also be taken, as much as the patient can bear, without fatigue, which will be essential in restoring the vital energy of the system, but more particularly the original tone of the part affected.

To these general rules may be added the efficacy of mercurials, with the volatile tincture of gum guaiacum, which, by perseverance, may wholly eradicate this dreadful disorder *.

SCIATICA AND LUMBAGO.

This is a species of rheumatism ; the pain, when seated in the hip, called *Sciatica*, and when in the

* As every thing likely to remove so painful a disease is worthy of trial, we cannot help here mentioning a medicine lately much in use, and which is said to have performed extraordinary cures, we mean Reynolds's Specific. We are no advocates for *specific* remedies of any kind ; but in desperate disorders like the rheumatism, we are glad to fly to any thing that promises ease, and this has been highly spoken of.

back, *Lumbago*. The late Dr. Fothergill recommended, and used with the utmost success, the following:—Six grains of calomel made into a pill, with conserve of roses. To be washed down with the following draught:—Take alexiterical water, one ounce and a half; alexiterical spirit, a drachm and a half; antimonial wine, thirty drops; Thebaic tincture, twenty-five drops; and simple syrup, one drachm; mix for one dose. The calomel may be diminished if it prove too cathartic. The flesh-brush may also be used with advantage.

INFLAMMATION OF THE EYES.

Inflammation of the eyes, or ophthalmia, may be easily distinguished by the redness and pain of the eye, an effusion of hot acrid tears, and an impossibility of bearing the light. It is brought on by a variety of causes, but more particularly by excessive use of spirituous liquors, writing or reading a great length of time by candle-light, or obstructed perspiration.

Leeches applied to the temples is one of the best remedies, but opening and diluting medicines are also necessary. Where the inflammation is not violent, the application of tepid water, for half an hour at a time, will frequently allay the inflammation, when a weak solution of white vitriol in rose water will generally restore them. As an ointment, take hog's-lard four ounces, with one ounce of the finest powder calaminoris; let these be

mixed well over the fire, with the addition of two ounces of honey. This ointment may be rubbed on the eyelid going to bed.

SORE-THROAT.

This disorder is both inflammatory and putrid. The inflammatory sore-throat is easily distinguished from the putrid, by the absence of ulcers, which may be easily observed by pressing down the tongue with the handle of a spoon. It principally attacks the youthful patient and persons of a full habit of body, and those who have been once attacked are always subject to a return of the disorder. It is a dangerous complaint, and the means for its eradication ought to be immediately applied. In its early stage frequently inhaling the steam arising from warm water and vinegar; if the patient can bear it, a gargle will be of great service, which may be composed of simple vinegar and water, sweetened with honey: if the inflammation should not yield to these means, and a supuration is likely to take place, the application of fomentations and emollient poultices to the throat is necessary, which will probably have the desired effect; but should the tumour not break readily, it will be necessary to employ the lancet. In this, as in all inflammatory affections, it is necessary to keep the body open by gentle laxatives; indeed, this precaution is indispensable.

The putrid sore throat is frequently produced by

contagion, being epidemical, and will sometimes run through a whole family. From the commencement of the disorder there is a great degree of fever, and a general debility, and loss of strength. About the second or third day large patches of red appear about the neck and throat, and spread over the body to the very fingers ends, which feel stiff and swelled; after remaining about four days these disappear, but without any termination of the symptoms. The infusion of two table-spoonfuls of Cayenne pepper, and a tea-spoonful of salt in half a pint of boiling water, for about an hour, with the addition of half a pint of warm vinegar, which may then be strained through a fine cloth, and two table-spoonfuls given every half hour, will prevent gangrene, and has, in the worst of cases, produced the happiest effects.

GOUT.

This disorder is said to have had its origin in intemperance and want of exercise: however that may be, it certainly pays its visits to those who neither indulge in one, or neglect the other. It generally makes its attack at the spring or fall of the year, and comes on about three or four o'clock in the morning, by a violent pain in the great toe, the heel, or the ancle; which increases till the torture becomes excruciating, and the patient undergoes all the variety of pain occasioned by burning, gnawing, squeezing, and the part being torn in pieces. This generally lasts for twenty-four

hours from the commencement of the fit, when the patient is generally relieved by the part swelling, and he drops asleep towards morning. A series of these paroxysms form a fit of the gout. No medicine has yet been discovered that will wholly cure the gout, though the specific, mentioned in the rheumatism, has certainly many respectable vouchers for its virtue, and is worthy a trial, when all other remedies fail to yield relief. Regimen is the only thing to be attended to, which must be varied according to the previous manner of living of the patient. Should he have been used to generous living, a glass of strong negus frequently, with a continuance of his usual diet, will be necessary: a tea-spoonful of the volatile tincture of guaiacum in a large draught of wine whey, will greatly promote perspiration, if taken when going to bed, and be of the utmost service. As the gout is an exertion of nature to throw off some offending cause, we should do nothing to retard her intention, by the use of repellants, which can only drive the disorder to some more vital part, without removing the disease. If the patient be young, and of a plethoric habit, it will be a relief to apply leeches to the inflamed parts; and should he be very restless, thirty or forty drops of laudanum may be administered at bed-time, which will not only procure rest, but also forward the crisis of the disease.

THE END.

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